

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VIVINT, INC.,
Petitioner,

v.

SB IP HOLDINGS LLC,
Patent Owner.

IPR2022-01365
Patent 8,164,614 B2

Before JAMESON LEE, KARL D. EASTHOM, and
JON M. JURGOVAN, *Administrative Patent Judges*.

JURGOVAN, *Administrative Patent Judge*.

DECISION
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

A. *Background*

Vivint, Inc. (“Petitioner”) filed a Petition requesting *inter partes* review of claims 14 and 15 (“challenged claims”) of U.S. Patent No. 8,164,614 B2 (Ex. 1001, “the ’614 patent”). Paper 1 (“Pet.”). SB IP Holdings LLC (“Patent Owner”) did not file a preliminary response. We instituted *inter partes* review under 35 U.S.C. § 314. Paper 8 (“Inst. Dec.”).

During the trial, Patent Owner filed a Response (Paper 11, “PO Resp.”), and Petitioner filed a Reply (Paper 13, “Pet. Reply”). Pursuant to the parties’ requests (Papers 15, 16), the Board held an oral hearing on January 23, 2024, and entered the hearing transcript into the record (Paper 22 (“Tr.”)).

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a). Having reviewed the complete trial record, we determine that Petitioner has shown, by a preponderance of the evidence, that the challenged claims are unpatentable.

B. *Real Parties in Interest*

Petitioner and Patent Owner identify themselves as real parties in interest. Pet. 1; Paper 3, 2.

C. *Related Proceedings*

Petitioner and Patent Owner each identify the following related litigations involving the ’614 patent: *SB IP Holdings LLC v. Vivint Smart Homes, Inc.*, No. 4:21-cv-00912 (E.D. Tex.); and *Vivint Inc. v. SB IP Holdings LLC*, No. 8:22-cv-00034 (C.D. Cal.) (the “California Litigation”). Pet. 1; Paper 3, 2–3. The California Litigation was transferred to the U.S.

District Court for the Eastern District of Texas, and is now pending under Civil Action No. 4:22-cv-00648-ALM. Pet. 1–2, Paper 3, 2–3.

The following *inter partes* review proceedings involve patents related to the '614 patent: IPR2022-00810 (U.S. Patent No. 8,139,098 B2); IPR2022-00811 (U.S. Patent No. 8,144,184 B2); IPR2022-00812 (U.S. Patent No. 8,154,581 B2); IPR2022-00813 (U.S. Patent No. 8,164,614 B2); IPR2022-00814 (U.S. Patent No. 8,144,183 B2); IPR2022-01352 (U.S. Patent No. 8,154,581 B2); IPR2022-01364 (U.S. Patent No. 8,144,184 B2); and IPR2022-01365 (U.S. Patent No. 8,164,614 B2). Pet. 2; Paper 3, 2.

Patent Owner identifies other indirectly related judicial matters before the federal district courts and the U.S. Court of Appeals for the Federal Circuit. Paper 3, 3.

D. The '614 Patent (Ex. 1001)

The '614 patent is titled “Communication and Monitoring System.” Ex. 1001, code (54). The '614 patent discloses an “audio-video communication system comprises a wireless exterior module located proximate an entrance, a computerized controller running a software application, and a remote peripheral device.” *Id.* at code (57). “The wireless exterior module includes a proximity sensor for detecting a person at the entrance, a video camera for recording an image of the person at the entrance, a microphone for recording the person at the entrance, a speaker for playing audio to the person at the entrance,” and “a receiver for receiving communications at the wireless exterior module.” *Id.* “The computerized controller is disposed in wireless electronic communication with the wireless exterior module via the transmitter and the receiver of the wireless exterior

module.” *Id.* “The remote peripheral device is configured to electronically communicate with the computerized controller for viewing an image from the video camera communicated from the wireless exterior module.” *Id.*

Additional details of the system are shown in Figure 1 below.

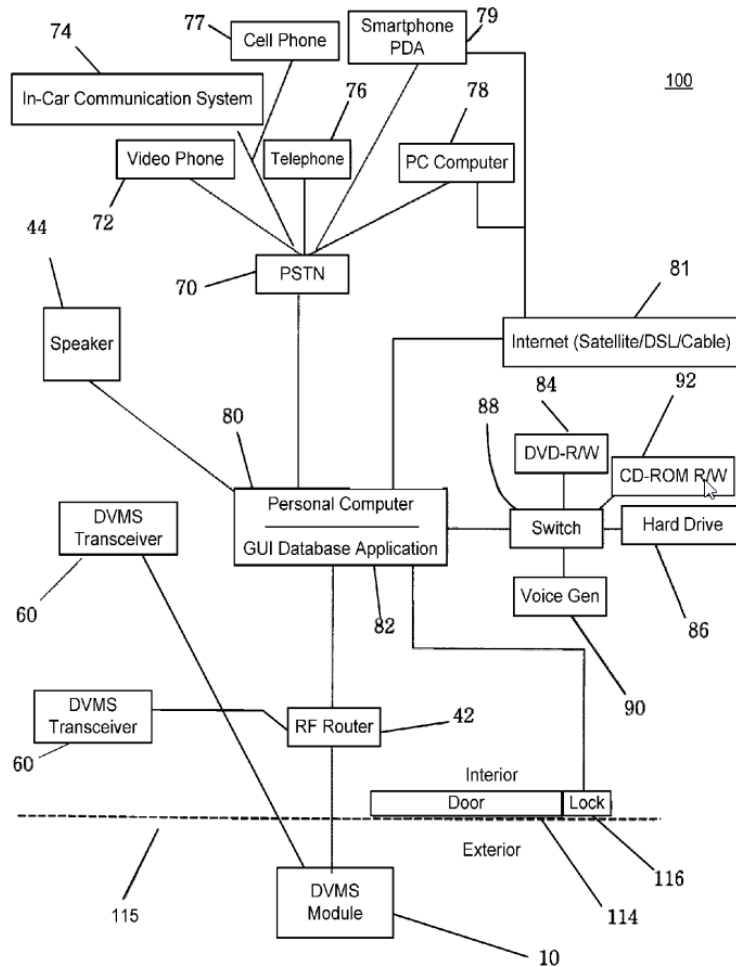


FIG. 1

Specifically, Figure 1 shows system 100 having DVMS module 10 located on the exterior of the home or office proximate door 114.¹ *Id.* at 7:50–51. Personal computer 80 runs a software application that includes DVMS Database Application 82 and graphic user interfaces (GUIs). *Id.* at 7:35–37.

¹ The '614 patent does not expressly define the acronym “DVMS.”

Personal computer 80, in accordance with the software application, controls communication in system 100, coordinates multiple communication devices in system 100, and is used to define responses to prompts and events in system 100. *Id.* at 7:37–41. Personal computer 80 may record video and audio communications transmitted to and from the DVMS module 10, and may play video and audio communications stored via personal computer 80. *Id.* at 6:56–61.

System 100 further includes one or more remote peripheral devices. *Id.* at 8:61–62. Such devices generally include video phones 72, in-car communication systems such as the well-known ONSTAR system 74 currently found in GM cars, telephones 76, cell phones 77, personal computers 78, smartphones/personal digital assistants (PDAs) 79, and other similar communication devices. *Id.* at 8:62–67. Each remote peripheral device is configured for electronic communication with personal computer 80 via at least public switching telephone network (“PSTN”) connection 70 or broadband connection 81. *Id.* at 8:67–9:3. Using a peripheral device, a user may view video of a person at the entrance of a building or home, or may view video after the person has left the entrance, which is supplied via computer 80. *Id.* at 4:1–13.

Figure 2 of the '614 patent is reproduced below:

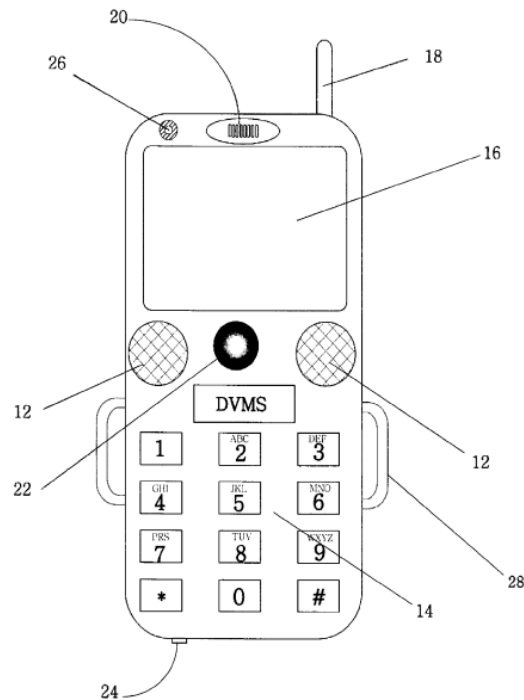


FIG. 2

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Figure 2 shows DVMS module 10 having video camera 22, speakers 12, proximity sensor 26, microphone 20, LCD display 16, quick connect electrical receptacle 24, and radio frequency receiver/transmitter represented by antenna 18. *Id.* at 7:58–62. Upon detection of movement, proximity sensor 26 activates camera 22, which in turn relays an image or streaming video to personal computer 80 where it is saved in a database in association with a timestamp. *Id.* at 7:62–66.

E. Claims

Claim 1 is the only independent claim of the '614 patent, and claims 14 and 15 are directly dependent from claim 1. These claims are reproduced below:

1. A communications and monitoring system, comprising:
 - (a) a wireless device associated with a door and configured to communicate audio and video data;
 - (b) a plurality of peripheral devices, each peripheral device associated with a respective user; and
 - (c) a computer configured for communication with the wireless device and configured for communication with each of the peripheral devices:
- (d) wherein the computer executes software, in accordance with which,
 - (i) the association of each of the peripheral devices with a respective user is maintained,
 - (ii) audio and video data from the wireless device is received by the computer, and
 - (iii) a graphical user interface is provided through which audio and video data from the wireless device is accessible by each respective user using one of the peripheral devices.

Ex. 1001, 19:44–61.

14. The communications and monitoring system according to claim 1, wherein the wireless device and at least one of the peripheral devices are configured for communications via text messaging.

Ex. 1001, 20:53–56.

15. The communications and monitoring system of claim 1, wherein the wireless device is portable, has a locking mechanism, and an electrical receptacle for quickly attaching to a source of electricity, and wherein the wireless device further includes a portable energy source.

Ex. 1001, 20:57–61.

F. Evidence

Petitioner relies on the following evidence:²

References		Date	Exhibit
Vaios ³	U.S. Patent No. 6,271,752 B1	Issued Aug. 7, 2001; filed Oct. 2, 1998	1003
Menard ⁴	International Pat. Pub. No. WO 01/093220 A1	Published Dec. 6, 2001; filed May 26, 2000	1004
Naidoo-068 ⁵	U.S. Patent No. 8,520,068 B2	Issued Oct. 10, 2002; filed Sept. 18, 2001	1007
Saylor ⁶	U.S. Patent No. 6,661,340 B1	Issued Dec. 9, 2003; filed Apr. 24, 2001	1008
Jae ⁷	Korean Patent App. No. 2001-0084277	Published Sept. 6, 2001	1011
Sabie ⁸	International Pat. Pub. No. WO 01/65875 A1	Published Sept. 7, 2001; filed Mar. 7, 2000	1035

² The '614 patent issued from Application 11/929,464 filed October 30, 2007, which is a continuation of Application 11/618,615, filed December 29, 2006, which is a continuation-in-part of Application 10/682,185, filed October 9, 2003, now Patent 7,193,644, and also claims priority to Provisional Application 60/418,384, filed October 15, 2002. *Id.* at codes (21, 22, 60, 63).

³ Petitioner contends Vaios is prior art under §§ 102(a)–(b). Pet. 3.

⁴ Petitioner contends Menard is prior art under at least §§ 102(a)–(b). Pet. 3.

⁵ Petitioner contends Naidoo-068 is prior art under at least §§ 102(a), (e). Pet. 3.

⁶ Petitioner contends Saylor is prior art under at least § 102(e). Pet. 3.

⁷ Petitioner contends Jae is prior art under at least §§ 102(a)–(b). Pet. 3.

⁸ Petitioner contends Sabie is prior art under at least § 102(e). Pet. 4.

References		Date	Exhibit
Schnell ⁹	U.S. Patent No. 6,735,387 B1	Issued May 11, 2004; filed Jan. 10, 2001	1031

Petitioner also relies on a Declaration of Bertrand M. Hochwald, Ph.D. (Ex. 1034). Patent Owner relies on a Declaration of Dr. Robert Akl (Ex. 2012). Petitioner further relies on a Reply Declaration of Dr. Hochwald (Ex. 2013). Deposition transcripts of the declarants are also in the record. Ex. 2009 (Deposition Transcript of Dr. Hochwald); Ex. 2011 (Deposition Transcript of Dr. Akl).¹⁰

G. Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 14 and 15 of the '614 patent on the following grounds:

Ground	Claims Challenged	35 U.S.C. § ¹¹	Reference(s)/Basis
1	15	103(a)	Vaios, Menard, Saylor
2	14	103(a)	Vaios, Menard, Saylor, Sabie
3	14	103(a)	Vaios, Menard, Saylor, Jae

⁹ Petitioner contends Schnell is prior art under at least § 102(e). Pet. 4.

¹⁰ With the exception of Dr. Hochwald's Declaration (Ex. 1034), the other Declarations and Depositions are from related case IPR2022-00812 filed in the instant case by Patent Owner. Patent Owner also filed a second Declaration of Dr. Bertrand Hochwald (Ex. 2014) that is from related case IPR2022-01352. Neither party objects to these documents as hearsay or as otherwise unreliable.

¹¹ The Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011) ("AIA"), amended 35 U.S.C. §§ 102, 103. Based on the record before us, the '614 patent has an effective filing date prior to the effective

Ground	Claims Challenged	35 U.S.C. § ¹¹	Reference(s)/Basis
4	15	103(a)	Vaios, Menard, Saylor, Schnell
5	14	103(a)	Naidoo-068, Vaios, Saylor, Sabie
6	14	103(a)	Naidoo-068, Vaios, Saylor, Jae
7	15	103(a)	Naidoo-068, Vaios, Saylor, Schnell

Pet. 8, 33, 39, 48, 57, 72, 73.

II. ANALYSIS

In this section, we address Petitioner's contentions that the challenged claims are unpatentable and Patent Owner's arguments for patentability.

A. *Legal Principles of Obviousness*

A claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious to a person having ordinary skill in the art to which said subject matter pertains. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations, including commercial

date of the applicable AIA amendments (March 16, 2013). Therefore, we apply the pre-AIA versions of 35 U.S.C. §§ 102, 103.

success, long-felt but unsolved needs, failure of others, and unexpected results.¹² *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

When evaluating a combination of teachings, we must also “determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). “[T]here must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d at 988.

B. Level of Ordinary Skill in the Art

Determining whether an invention would have been obvious under 35 U.S.C. § 103 requires resolving the level of ordinary skill in the pertinent art at the time of the effective filing date of the claimed invention. *Graham*, 383 U.S. at 17. The person of ordinary skill in the art is a hypothetical person who knows the relevant art. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). Factors in determining the level of ordinary skill in the art include the types of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made, the sophistication of the technology, and educational level of active workers in the field. *Id.* Not all factors may be present in any case, and one or more factors may predominate. *Id.*

Petitioner contends as follows:

A person of ordinary skill in the art (“POSITA”) for the ’614 patent is generally one who has a Bachelor’s degree in computer science, electrical engineering, or a related field, with two years of experience in audio and/or video processing,

¹² The parties do not introduce any evidence of secondary considerations of nonobviousness.

networked communication systems, sensor systems, and/or remote monitoring systems.

Pet. 7 (citing Ex. 1034 ¶¶ 21–24).

Patent Owner argues that “Petitioner and its expert rely on conclusory statements regarding a person of ordinary skill in the art.” PO Resp. 2.

Patent Owner asserts as follows:

Petitioner’s expert merely lists a handful of factors, in stating that he has taken those factors “into account” . . . but fails to provide any analysis of those factors with which the Board can determine whether his opinion “is based on sufficient facts or data; . . . is the product of reliable principles and methods; and . . . reliably applied the principles and methods to the facts of the case.”

Id. (quoting Fed. R. Evid. 702). Patent Owner argues that, “[a]ccordingly, Hochwald’s conclusory opinion should be given no weight.” *Id.* (citing *One World Techs. Inc. v. Chevron Ltd.*, IPR2020-00885, Paper 21 at 29 (PTAB Nov. 6, 2020)). Patent Owner further asserts

Because Petitioner’s invalidity arguments are all premised on whether this black box POSITA would be motivated to combine various references, each of Petitioner’s grounds lack a reliable prerequisite determination of the level of skill of a POSITA and are flawed as a result.

Id.

Petitioner replies that “Petitioner’s expert explains the factors he considered in establishing his proposed level of skill.” Pet. Reply 1 (citing Ex. 1034 ¶¶ 21–24). Additionally, Petitioner contends that “the prior art itself often establishes the level of skill in the art at the time of the invention” and asserts that “[a]s explained in the Petition, the level of skill proposed by Petitioner and adopted by the Board is supported by the prior art.” *Id.* (citing Pet. 7; Inst. Dec. 10–11).

Although Patent Owner criticizes Petitioner's expert for not setting out the details of his analysis in arriving at the level of ordinary skill in the art, Patent Owner does not assert that Patent Owner's proposed level is incorrect, or propose an alternative, or argue that the outcome of this case depends upon acceptance of some other (unproposed) level as the correct one.

Petitioner's expert indicates that he considered the correct factors (Ex. 1034 ¶¶ 21–24), and we accept his definition of the level of ordinary skill in the art in the absence of any showing that Petitioner's proposed level is incorrect. We also agree that Petitioner's proposed level of skill in the art is consistent with the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1354–55 (Fed. Cir. 2001) (the applied prior art may reflect an appropriate level of skill).

C. *Claim Construction*

In an *inter partes* review, we use the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100(b). The claim construction standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc) is applicable.

Only those claim terms “that are in controversy need to be construed, and only to the extent necessary to resolve the controversy.” *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed.

Cir. 2011); *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Petitioner contends that constructions differing from the ordinary and customary meaning are not required for any claim terms. Pet. 7. “Patent Owner does not take a position regarding the need for claim construction.” PO Resp. 1.

As there is no controversy between the parties regarding the meaning of any claim term, no special construction is necessary and we apply the ordinary and customary meaning of the claim terms. *See Nic, Wellman, VividTechs, supra*.

D. Petitioner’s Expert Testimony

Patent Owner contends that “Petitioner violates 37 C.F.R. § 42.6(a)(3) by [citing Dr. Hochwald’s declaration], which includes pages of arguments and evidence that are not in the Petition.” PO Resp. 21. Patent Owner further argues that “all facts . . . that are not specifically discussed in the Petition should be disregarded by the Board.” *Id.*

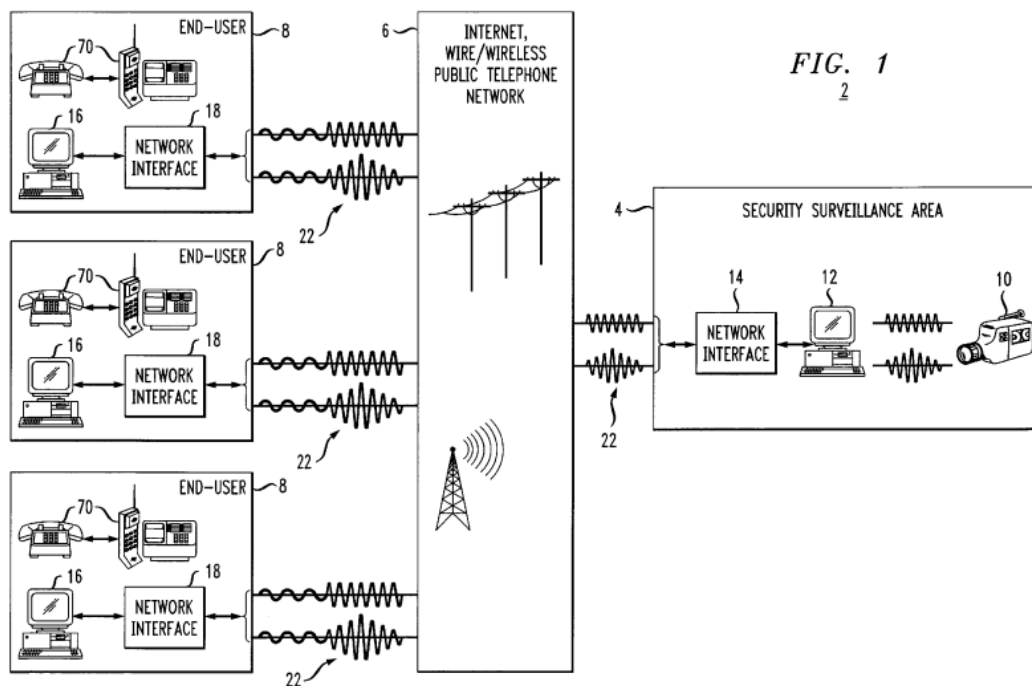
Patent Owner does not identify what arguments, evidence, or facts it alleges to have been incorporated by reference improperly from Dr. Hochwald’s declaration into the Petition. Consequently, Patent Owner has not demonstrated that Petitioner committed the violation it asserts, nor has Patent Owner shown that the circumstances here warrant imposing the severe consequence of disregarding Petitioner’s expert’s declaration. In other words, Patent Owner’s arguments are conclusory because they do not cite to underlying evidence. *Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043 (Fed. Cir. 2017).

E. Ground 1: Alleged Obviousness of Claim 15 over Vaios, Menard, and Saylor

We now consider the prior art references Vaios, Menard, and Saylor, and the obviousness challenge asserted against claim 15 on the combination of these references.

1. Overview of Vaios (Ex. 1003)

Vaios's multi-access remote system is shown in Figure 1, which is reproduced below.



Vaios's Figure 1 shows multi-access remote system 2 with security surveillance area 4, end user locations 8, and communications network 6 for establishing connection 22 with security surveillance area 4 and end user locations 8. *Id.* at 3:14–23.

Security surveillance area 4 comprises local computer system 12 coupled to network interface 14 and to video camera 10 having a motion sensor. *Id.* at 3:24–27.

Local computer system 12 is coupled to camera adapter 116 (Fig. 2) to video camera 10 so that video, sound, and motion sensor data can be transmitted from the camera to the local computer system, and instructions or other data can be transmitted from the local computer system to the video camera. *Id.* at 3:27–32. Local computer system 12 is also coupled to network interface 14 to use communication network 6 to establish connection 22 and communicate with one or more end user locations 8. *Id.* at 3:32–36. Local computer system 12 includes fixed storage means 109, modem 110, operating system software 111, network adapter 112, audio/video coder/decoder 114, application programming interface module 131, and application software 136. *Id.* at 3:37–4:4.

End user locations 8 comprise remote computer systems 16, network interface 18, and one or more optional communicative devices 20 such as a telephone or wireless device. *Id.* at 4:5–14. Remote computer systems 16 each comprise the same software and hardware computer components as local computer system 12. *Id.* at 4:15–17.

2. *Overview of Menard*¹³ (Ex. 1004)

Menard teaches a wireless communication and control system for a variety of applications, including building maintenance and control, premises security, and personal safety. Ex. 1004, 1:7–9. The system comprises a security sensor and a wireless transceiver communicating using a network protocol. *Id.* at 4:11–13. The sensor may include a motion

¹³ Citation to the pages of Menard are made with reference to the actual page numbers of the patent publication, not to the six-digit BATES numbering added by Petitioner to Exhibit 1004.

sensor, a passive infrared motion detector, pressure sensor, position sensor, proximity sensor, glass breakage sensor, or a video camera. *Id.* at 4:16–18.

Figure 1 of Menard is reproduced below:

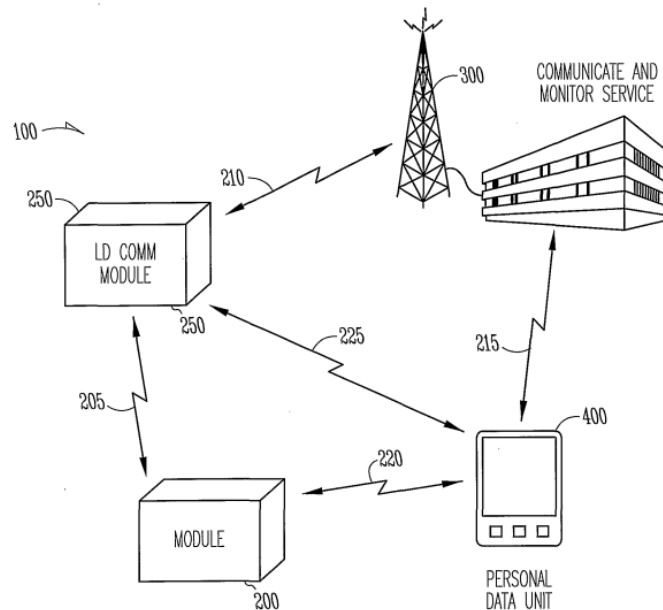


Fig. 1

Figure 1 shows a system 100 that includes “module 200, long distance communication (‘LD comm’) module 250, communication and monitor service facility (‘facility’) 300, and personal data unit (‘PDU’) 400.”¹⁴ Ex. 1004, 12:20–23. Module 200, in response to a sensed or detected condition, generates and wirelessly transmits digital data to LD comm module 250. *Id.* at 12:29–13:4. Module 200 is also in wireless communication with PDU 400 via link 220. *Id.* at 12:27–28.

LD comm module 250 transmits the received signal to facility 300. *Id.* at 13:8–9. LD comm module 250 is also in communication with PDU

¹⁴ PDU 400 can be a two-way pager (“400A”), a cellular phone (“400B”), or a personal digital assistant (“PDA 400C”). Ex. 1004, 19:9–15.

400 via link 225. *Id.* at 13:12–13. After receiving the digital data transmitted by module 200, PDU 400 displays or renders the information in a manner useful to a person carrying PDU 400, and provides an audible signal to the user. *Id.* at 13:17–19.

Figure 7 of Menard is reproduced below:

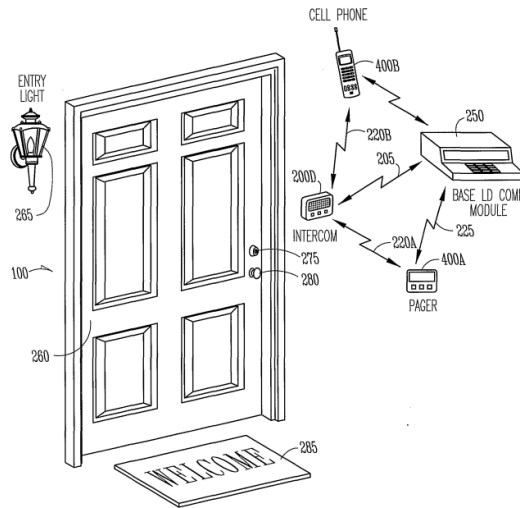


Fig. 7

Figure 7 illustrates an entry door with Menard's system. Ex. 1004, 10:31–32. Module 200D is mounted on the exterior of the residence and is proximate to entry door 260. *Id.* at 19:32–20:1. Module 200D is in wireless communication with PDU 400B (cellular telephone), PDU 400A (two-way pager), and base 250A that includes LD comm module as well as user operable controls and display to enable programming and operation of system 100. *Id.* at 20:3–8. Menard describes the following:

In operation, a caller at entry door 260 can initiate communication with a user via a PDU. For example, in one embodiment, a caller arriving at locked door 260 can operate module 200D in much the same way as a doorbell, that is, by activating a prominent and conspicuous button. Module 200D then encodes and communicates a digital message for

transmission to PDU 400. The digital message may be communicated directly from module 200 to PDU 400B, for example, either directly (via link 220B), or indirectly, via LD comm module 250A. In one embodiment, the communication to, and from, module 200D involves a BLUETOOTH® channel. In this example, the user receives notification of the presence of the caller by means of PDU 400B. The user, and PDU 400B, may be located inside the residence, in which case a direct connection using link 220B may be possible. Alternatively, the user, and PDU 400B, may be located outside of the residence, in which case, an indirect link, including link 205 coupling the LD comm module 250A may be employed. In either case, the caller is unlikely to perceive the actual location of the user. Furthermore, by way of operating the controls or a numeric keypad on PDU 400B, the user may control the operation of entry light 265 or lock 275 and thereby grant access to the premises for the caller.

Ex. 1004, 20:13–31.

Figure 9 of Menard is reproduced below:

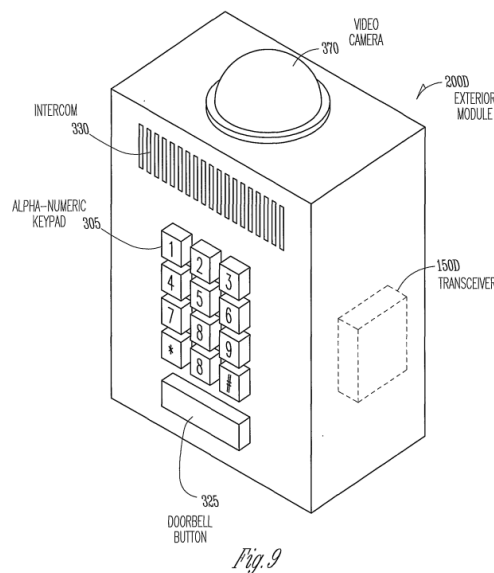


Figure 9 depicts exterior module 300D having video camera 370 and transceiver 150D. *Id.* at 23:15–17. The arrival of the caller is detected by video camera 370. *Id.* at 21:13–14. In response to actuation of the button,

or detection by camera 370, exterior module 200D transmits a wireless signal. *Id.* at 21:14–15.

Figure 10 of Menard is reproduced below:

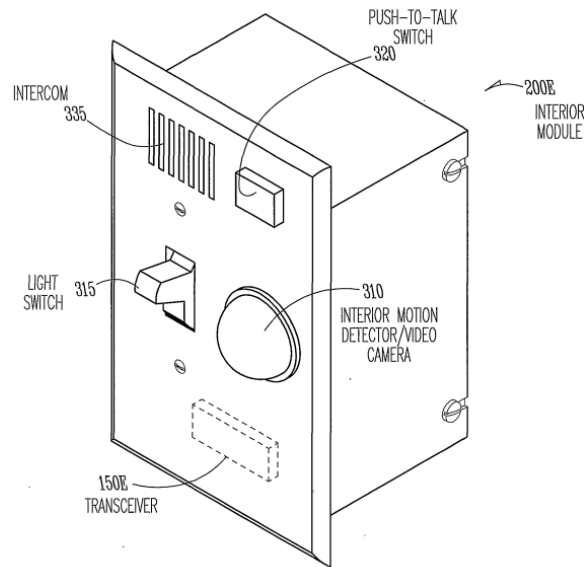


Fig. 10

Figure 10 depicts interior module 200E having intercom 335, push-to-talk (“PTT”) switch 320, interior motion detector/video camera 310, transceiver 150E and light switch 315. *Id.* at 22:29–31.

3. Overview of Saylor (Ex. 1008)

Saylor relates to a personal security network connected to a wireless communication system to automatically inform an owner or other authorized entities in a manner prescribed by the user when alarm situations occur.

Ex. 1008, 1:6–12. In using the security network, “a user may set up personalized alarms and alert services; identify various methods of contact; order at which to be contacted; individuals and entities to be contacted; type of situations to be alerted of and other relevant security and other information.” *Id.* at code (57).

Saylor further discloses that central security network 130 may contact one or more users 160 or other identified contacts 162₁–162_N as specified by the user based on information retrieved from databases. *Id.* at 7:45–51. These databases include a user database 140 that stores a personal address book where contact information (e.g., phone, pager, mobile device, etc.) associated with various individuals may be stored and accessed based on various identified alarm situations. *Id.* at 7:3–7.

4. *Motivation to Combine*

We now address Petitioner’s proposed reasons to combine Vaios, Menard, and Saylor with a reasonable expectation of success, Patent Owner’s arguments against the combination, and provide our analysis to explain why we find Petitioner’s proffered motivations persuasive in this case.

a) *Petitioner’s Contentions*

Petitioner contends that one of ordinary skill in the art would have combined Vaios, Menard, and Saylor for several reasons.

Specifically, Petitioner contends that, to the extent Vaios is considered not to disclose wireless cameras, one would have been motivated to combine Vaios and Menard because wireless cameras were well-known and because such combination merely incorporates known elements (e.g., Menard’s radio frequency transmitter and receiver) into Vaios’s device/camera, or simply substitutes Menard’s wireless connections between Vaios’s cameras 10 and local computer system 12 in a manner yielding predictable results. Pet. 12–13 (citing Ex. 1034 ¶¶ 112–116). Petitioner contends that there was a reasonable expectation of success in using wireless connections given widespread knowledge and use of wireless communication protocols in

security systems and other networks, which offer advantages such as easier camera installation and maintenance compared to wired alternatives. *Id.*

Petitioner also contends that it was obvious to associate Vaios's peripheral devices (including remote computer system 16 or communicative devices 20) with respective individuals as taught in Saylor so that Vaios's system could similarly provide notifications and video to specific desired individuals (e.g., multiple individuals living in a home) via their associated devices. *Id.* at 15 (citing Ex. 1034 ¶¶ 127–131). Petitioner contends that the combination of Vaios and Saylor incorporates known elements (e.g., associating respective individuals with specific devices via a database/address book as taught by Saylor) into Vaios's system (e.g., local computer system 12) in a known manner to yield predictable results with a reasonable expectation of success. *Id.* at 15–16. According to Petitioner, the proposed combination offered advantages, such as providing notifications and data to specific, desired individuals per user preferences, and assigning a notification priority that conserves system resources and speeds alarm response by contacting specific, designated users via associated devices in a predetermined order. *Id.* at 16 (citing Ex. 1034 ¶¶ 130–131), 21.

Petitioner further contends that it was obvious for Menard's exterior module 200D to include an electrical receptacle for quickly attaching to a source of electricity given Menard's use of a battery to power exterior module 200D. *Id.* at 29 (citing Ex. 1034 ¶ 190). Petitioner contends, given the widespread use of batteries for cameras/monitoring devices as well as innumerable electronic devices at the time of the alleged invention, a person of ordinary skill in the art would have found it obvious to use any of a

plethora of electrical receptacles for connecting to and/or recharging such batteries, and would have been motivated to include an electrical receptacle in the exterior module to facilitate quick electrical attachment/connection to such batteries, and/or to power the device when another source of power is readily available such that the battery is preserved for only when needed. *Id.* Petitioner contends that use of such receptacles would have been easily achieved with a high expectation of success given the widespread use of batteries and corresponding electrical receptacles at the time. *Id.* Petitioner contends that this is a common feature in everyday household items such as in-home smoke detectors, which regularly incorporate an electrical receptacle for powering the detector in normal use, while also incorporating batteries as a back-up for when the regular power source is unavailable. *Id.*

Petitioner further contends that such a modification of Vaios would have simply involved the combination of Menard's portability-related elements (e.g., Menard's wireless communication capability and battery power supply) with Vaios's camera and monitoring system according to known methods to yield predictable results. *Id.* at 30–31. Petitioner contends that the widespread use of battery power and wireless communications at the time, as exemplified, for example, by common in-home devices such as remote controls, cameras, and the like, would have made the incorporation of such features in Vaios's system and cameras a simple, predictable task. *Id.* at 31. The combination would have had a reasonable expectation of success given the widespread usage and routine implementation of such features in other similar devices. *Id.*

Petitioner also contends that a person of ordinary skill in the art would have been motivated to make the foregoing combination of Vaios and

Menard by the desirability of creating portable cameras/monitoring devices. Pet. 31 (citing Ex. 1034 ¶ 193; Ex. 1031, 1:28–30, 1:62–63, 3:2–24).

Petitioner contends that a person of ordinary skill in the art would have recognized the benefits associated with quickly and easily relocating a portable monitoring device and easily connecting the device to power in a simple, convenient manner (e.g., “hand-turnable knobs” and/or straps and battery power) as well as communicatively to other system devices (using wireless communications), and just as easily unsecuring and disconnecting the device for relocation. *Id.*

Petitioner contends that it was also obvious to include Vaios’s locking mechanism or electronically actuated lock to allow a user to remotely unlock and grant access to a secure building via a monitored entrance as taught in Menard. *Id.* at 32 (citing Ex. 1034 ¶¶ 194–195). Petitioner contends that this modification amounts to a simple combination of known elements (i.e., Menard’s electronically actuated lock/locking mechanism with Vaios’s monitoring system) according to known methods to yield predictable results. *Id.* Given that communication and control of Vaios’s video cameras (and other devices in the security surveillance area) is conducted by local computer system 12, upon implementation of such a mechanism in Vaios’s system, according to Petitioner, it would have been a simple task to actuate the lock using local computer system 12. *Id.*

Petitioner further contends that the combination would have provided the advantage of enabling a user to grant access to a secured location using a remote device, which would have motivated a person of ordinary skill in the art to make the combination. *Id.* (citing Ex. 1034 ¶ 195). Additionally, Petitioner contends that the combination would have had a reasonable

expectation of success given the well-known history of using electronically actuated locks and given no significant additional infrastructure was required beyond that already taught in Vaios. *Id.*

b) Patent Owner's Contentions

Patent Owner argues that the Petition fails to provide any motivation to combine any of the references beyond conclusory and generic reasons, including that the combination “would (1) offer fast, simple, lost-cost communication, (ii) create a portable cameras/monitoring devices, (ii) create a simpler, more user-friendly, and convenient monitoring.” PO Resp. 40–45 (citing Pet. 13, 16, 31–32, 38–39, 47–48, 57, 66, 70–71).

Patent Owner argues that the Petition does not explain why a POSITA would be concerned with any of the articulated motivations, and that Petitioner’s conclusory approach to the motivation is not “thorough and searching” or “based on objective evidence of record.” *Id.* at 45 (citing *In re Sang Su Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002)). Patent Owner argues that even a common-sense motivation must be explained with sufficient reasoning and may not rely on expert testimony unsupported by underlying facts or data and merely repeating verbatim the conclusory assertion for which it is offered to support. *Id.* at 45–46 (citing *DSS Tech. Mgmt., Inc. v. Apple, Inc.*, 885 F.3d 1367, 1374 (Fed. Cir. 2018); *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15–16 (PTAB Sept. 6, 2018) (precedential)).

Patent Owner argues that “the Petition’s lack of any rational motivation to explain why a POSITA would make any of the proposed combinations is fatal to every ground.” *Id.* at 46. Patent Owner asserts that “the Petition lacks evidence of a long-felt need, market forces, the nature of

the problem to be solved, or any other reason for a POSITA to combine these references beyond the conclusory reasons listed above.” *Id.* Patent Owner further argues that the Petition’s purported motivation concerns the result of the combination, not a reason why a POSITA would choose to combine the references. *Id.*

Furthermore, Patent Owner avers that Petitioner’s motivation to combine is inadequate because it “bears no relation to the specific combination of prior art elements” and it “also fails to explain why a person of ordinary skill in the art would have combined elements from specific references in the way the claimed invention does.” PO Resp. 46–47 (citing *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012); *Xerox Corp.*, IPR2022-00624, Paper 12 at 5 (precedential); *In re Ethicon, Inc.*, 844 F.3d 1344, 1348, 1352 (Fed. Cir. 2017); and *TQ Delta, LLC v. Cisco Sys.*, 941 F.3d 1352, 1359 (Fed. Cir. 2019)).

Moreover, Patent Owner contends that Petitioner’s expert, Dr. Hochwald, testified in a related IPR that the motivation to combine Vaios with Menard’s Bluetooth wireless network depends on various factors such as if a wireless network would be more cost effective when retrofitting an existing structure and that the choice of network would be influenced by the physical size of the area to be monitored. *Id.* at 47 (citing Ex. 2014 ¶ 204). Patent Owner argues that there is no evidence that the distances involved would permit the combination of Vaios and Menard. *Id.* (citing *Xerox Corp.*, IPR2022-00624, Paper 12 at 5; Paper 9 at 15–16 (precedential) (citing 37 C.F.R. § 42.65(a)).

Additionally, Patent Owner argues that there is additional evidence proving that a POSITA would not have combined Vaios and Menard. *Id.* at

48. Specifically, Patent Owner contends that Vaios teaches away from a wireless connection between its exterior module and local computer because of “bandwidth issues associated with sending uncompressed video files wirelessly.” PO Resp. 48 (citing Ex. 2012 ¶¶ 76–78). Patent Owner asserts that its declarant, Dr. Akl, testified that “the raw data coming from the camera [in Vaios] has to be on a wire to get it to the computer that is then going to act on and compress it before it can do anything else with it.” *Id.* (citing Ex. 2011, 186:4–187:9). Patent Owner argues that the link between Vaios’s camera and local computer transfers “raw image data” and thus has the system’s highest bandwidth requirement. *Id.* at 48–49 (citing Ex. 2011, 183:10–187:9). Weighing the benefits and drawbacks, Patent Owner contends that a POSITA considering Vaios would have favored a wired connection over wireless for the link between Vaios’s camera and local computer. *Id.* at 49 (citing *Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1332 (Fed. Cir. 2019)).

In summary, Patent Owner argues that the Petition failed to identify any reason why a POSITA would have been motivated to combine the prior art references. *Id.* (citing *Hamilton Beach Brands, Inc. v. f’real Foods, LLC*, 908 F.3d 1328, 1342 (Fed. Cir. 2018)). Patent Owner contends that this is fatal to all grounds in the Petition. *Id.* (citing 37 C.F.R. § 42.65(a)).

c) Discussion of Reasons to Combine Vaios, Menard and Saylor

To the extent that Vaios’s camera is considered not to be wireless, Petitioner proposes (1) to incorporate Menard’s radio frequency transmitter and receiver into Vaios’s device/camera; or (2) to substitute Menard’s wireless connections between Vaios’s camera 10 and local computer system 12 in a manner yielding predictable results. Pet. 12–13 (citing Ex. 1034

¶¶ 112–116). Combining known elements by known methods (as in rationale (1) above), or simple substitution of one known element for another (as in rationale (2) above), when yielding predictable results, are recognized rationales supporting a motivation to combine under *KSR*. *KSR*, 550 U.S. at 416–417. We agree with Petitioner that the evidence in this case supports either rationale.

The facts are undisputed that wireless transmitters and receivers (transceivers) and wireless connections were known in the art by the time of the '614 patent, as demonstrated, for example, by Menard. Pet. 11 (citing Ex. 1034 ¶¶ 107–115; Ex. 1004, code (57)); Ex. 1004, 20:3–6. Petitioner's expert, Dr. Hochwald, testifies that by this time radio frequency (i.e., wireless) transceivers were small enough to incorporate in Vaios's camera without difficulty, and that their power requirements were not excessive. Ex. 1034 ¶ 114.

Similarities in prior art references may provide support for their combination. *Wyers v. Master Lock Co.*, 616 F.3d. 1231, 1241 (Fed. Cir. 2010). Dr. Hochwald states that the similarities of Vaios's and Menard's technologies would have led a person of ordinary skill in the art to combine them. Ex. 1034 ¶¶ 108–109, 113–114. For example, both are directed to security systems and video monitoring of an area such as a building or home entrance, both detect events that trigger system responses, and both communicate with other devices using similar protocols. *Id.* We agree with Dr. Hochwald that the similarities of Vaios and Menard would have prompted one of ordinary skill in the art to consider them together and combine them for the purposes advanced in the Petition.

A reason to combine may be found in the prior art references themselves. *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1365 (Fed. Cir. 2006). Vaios describes “a need for an inexpensive multi-access remote system that enables individuals to access remotely a security surveillance or other video system area and appropriately monitor and operate this area as desired.” Ex. 1003, 1:60–63. In addition, Vaios states that “there is a need to contact the system users at specific times, such as when an alarm triggers, to provide surveillance access when needed, rather than monitoring the area full time.” *Id.* at 1:63–67. Vaios also describes a need to eliminate “expensive cables” and a similar “desire [for] a surveillance system that is accessible from any location, not only those that have cabling.” *Id.* at 1:57–59.

Menard describes as its objectives, and thus the related problems that it solves, to enable portable, modular, bidirectional communication between a wide variety of devices and that satisfies the demand for security systems and automated building controls. Ex. 1004, 1:26–28. Menard also states that “what is needed in the art is a system enabling both safety and convenience features in an affordable, modular, arrangement that is easy to install and manage.” *Id.* at 1:29–31.

We agree with Petitioner that a POSITA studying the teachings of Vaios and Menard would have appreciated the desirability of combining the improvements taught by these references to obtain a system with enhanced capabilities. Pet. 13 (citing Ex. 1034 ¶ 115).

A reason to combine prior art references may be found when the combination produces advantages. *Unwired Planet, LLC v. Google Inc.*, 841 F.3d 995, 1003–04 (Fed. Cir. 2016) (references teaching the advantages of a

technique shows there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue). Dr. Hochwald noted the combination would provide the advantages of providing Vaios's and Menard's components and functionalities in a single wireless monitoring device with reduced installation and maintenance costs by eliminating hard wiring, and providing greater flexibility where the camera is physically positioned or repositioned. Pet. 13 (citing Ex. 1034 ¶ 115). We agree with Petitioner and Dr. Hochwald that the combination would produce advantages that a POSITA would have desired.

Furthermore, Dr. Hochwald's testimony establishes that it was within the level of ordinary skill in the art to combine and use these technologies. Specifically, he stated that the "combination would have been relatively easily implemented using standard engineering techniques at the time including the optional incorporation of hardware and/or software components and standard communication protocols at the time." Ex. 1034 ¶ 112. He further testifies that "Vaios and Menard both use a communication system such as the internet and public switched telephone network to facilitate communication of the trigger events and communication between a person at the entrance and a remote user." *Id.* (citing Ex. 1003, Fig. 1; Ex. 1004, Fig. 4). According to Dr. Hochwald, a "POSITA would therefore find it simple to modify the teachings of Vaios to incorporate the teachings of Menard, without requiring significant or unpredictable changes in interfaces, complexity, cost or methodology and would have had a high expectation that the combination would have succeeded." *Id.* We agree with Dr. Hochwald that a POSITA would have had a reasonable expectation of success in combining Vaios and Menard.

We also agree with Petitioner that it was obvious to associate Vaios's peripheral devices (including remote computer system 16 or communicative devices 20) with respective individuals according to Saylor's teachings to similarly provide notifications and video to desired individuals via their associated devices. Pet. 14–16 (citing Ex. 1034 ¶¶ 118–131; Ex. 1003, code (57), 2:26–33, 3:49–58, 4:5–20, 7:45–51, 8:55–9:9). Petitioner asserts, and we agree, that the combination of Vaios and Saylor incorporates known elements (associating individuals with a database/address book as taught in Saylor) into Vaios's system (e.g., local computer system 12) in a known manner to yield predictable results with a reasonable expectation of success. *Id.* at 16; *KSR*, 550 U.S. at 416.

Petitioner asserts that the proposed combination offered advantages such as providing notifications and data to specific, desired individuals according to user preferences, and assigning notification priority that conserves system resources and speeds alarm response by contacting specific, designated users via associated devices in a predetermined order. Pet. at 16 (citing Ex. 1034 ¶¶ 130–131). We agree with Petitioner that these advantages would have prompted a POSITA to pursue the combination.

Furthermore, there are many similarities between Vaios and Saylor that would have led a POSITA to consider them together. *Wyers*, 616 F.3d. at 1241. For example, Vaios teaches that its security surveillance system has end user locations 8 including remote computer system 16 and communicative devices 20 such as a telephone, beeper, fax, e-mail, or wireless device for contacting, or being contacted by, the system when alarm situations occur. Pet. 13–14 (citing Ex. 1003, code (57), 4:5–20). Vaios also teaches that its system can be secured to only allow access to certain

individuals, that remote individuals can use end user locations to control cameras or view video, that communicative devices 20 include personal devices such as a beeper, e-mail, or wireless device, that alarm notifications are sent to a remote individual, and that its system includes multiple devices for multiple individuals. *Id.* at 14 (citing Ex. 1034 ¶ 123).

Similarly, Saylor teaches a security system that allows users to register their security devices with a central security network that automatically informs authorized entities when alarm situations occur. *Id.* at 14–15 (citing Ex. 1008, 1:7–12, 3:49–58). The user may also set personal preferences such as contact information, contact individuals, communication methods, order of contact, and special instructions. *Id.* at 15 (citing Ex. 1008, 3:51–58). The system stores this information in a database including “a personal address book where contact information (e.g., phone, pager, mobile device, etc.) associated with various individuals may be stored and accessed based on various identified alarm situations.” *Id.* (citing Ex. 1008, 7:3–7; Ex. 1034 ¶¶ 124–126). We agree with Petitioner that the overlapping disclosures of Vaios and Saylor would have led a POSITA to combine them together.

In addition, we agree with Petitioner that a POSITA would have had a reasonable expectation of success in associating peripheral devices with respective individuals using Saylor’s teachings. Pet. 16 (citing Ex. 1034 ¶¶ 127–131). As Dr. Hochwald states, the implementation of Saylor’s database and user preferences in Vaios’s system “would be well within the means of a POSITA” because Vaios considers fixed storage means and databases part of its invention, and discloses that the remote computer systems may include the same software and hardware components as its

local computer system such that Vaios's system would readily accept the database additions and suggestions of Saylor, and the chance of success would be high and well within the capabilities of a POSITA at the time. Ex. 1034 ¶ 129.

As to Patent Owner's arguments, we do not agree that the Petition fails to explain why a POSITA would have been concerned with the articulated motivations, was conclusory and not thorough and searching, was not based on objective evidence of record, was based only on the result of the combination, or bore no relationship to the prior art elements. PO Resp. 45–47. For example, Petitioner explained that using Menard's teaching of wireless transceivers and wireless connections would reduce installation and maintenance costs by eliminating the need for wiring between Vaios's video camera and local computer system, and allow increased flexibility of where the camera can be positioned. Pet. 13 (citing Ex. 1034 ¶ 115). Although Patent Owner argues that the Petition lacked "any rational motivation to explain why a POSITA would make any of the proposed combinations" (PO Resp. 46), Petitioner's contentions are supported by the prior art references. Vaios teaches that wireless connections can avoid "expensive cables" and states that "small businesses and individuals constantly change locations and even if proper cabling can be installed they may desire a surveillance system that is accessible from any location, not only those that have cabling." Ex. 1003, 1:55–59. Similarly, Menard teaches the desirability of a "system enabling both safety and convenience features in an affordable, modular, arrangement that is easy to install and manage." Ex. 1004, 1:29–31. Thus, Vaios and Menard expressly teach using wireless features in security systems to reduce installation and maintenance costs. Contrary to Patent

Owner's arguments, the prior art references support Petitioner's contentions and provide ample reason to combine. *See Dystar*, 464 F.3d at 1365.

Furthermore, the Petition states that Vaios's end user locations include a remote computer system and communicative devices that are each associated with a remote individual. Pet. 13–14 (citing Ex. 1034 ¶¶ 118–123; Ex. 1003, code (57), 2:26–33, 4:5–20, 8:55–9:9). The remote computer system and communicative devices include a computer, telephone, beeper, e-mail, and wireless device, which were known to be personal devices typically associated with a user. *Id.* at 14 (citing Ex. 1034 ¶ 123). In addition, Vaios teaches that its local computer system includes “fixed storage means” to store video and audio data, and that, when an alarm triggers, the security surveillance area notifies remote individuals at a predetermined address via telephone, beeper, e-mail or wireless device. *See, e.g.*, Ex. 1003, 2:10–33, 3:14–41, 8:48–9:9.

Similarly, as the Petition recognizes, Saylor teaches that users register security devices with a central security network which has a database with a personal address book, and that the users provide contact information, contact individuals, communications methods, order of contact, and special instructions that the security system uses to automatically inform the users when alarm situations occur. Pet. 14 (citing Ex. 1034 ¶¶ 124–131; Ex. 1008, 1:7–12, 3:49–58, 7:3–7, 7:45–51). Thus, a POSITA would recognize that Saylor's databases and personal address book store the association of each of the peripheral device with a respective user to automatically contact them when an alarm triggers, similar to Vaios's system notifying remote individuals via their remote computer system or communicative devices when an alarm triggers.

Thus, contrary to Patent Owner's arguments, Petitioner's motivations to combine were articulated in the Petition, were not conclusory, lacking in thoroughness, or irrational, and were based on evidence in the record (including Dr. Hochwald's testimony and the teachings of the prior art). PO Resp. 45–47. To the extent Petitioner's motivations were based on a result of the combination, by which we assume that Patent Owner means ease of installation, maintenance and flexibility in positioning the wireless video camera and associating a peripheral device with an end user to be notified when an alarm triggers, Petitioner, Dr. Hochwald, and the prior art references taught how that result would be achieved through the use of wireless transceivers and connections, and databases with a personal address book. *Id.* at 45–47; Pet. 13–16.

Patent Owner further argues that Dr. Hochwald admitted that the choice of whether a wireline or wireless network would be more cost effective is influenced by the physical size of the area to be monitored, and alleges that Petitioner did not show whether the distances involved would permit combination of Vaios's system with Menard's Bluetooth wireless network. PO Resp. 47. However, Dr. Hochwald stated that many wireline and wireless local-area and wide-area communications protocols were available at the time, and their effective distances of operation were "well known to a POSITA." Ex. 2014 ¶ 204. According to Dr. Hochwald, the substitution of one network for another would be determined by the situation of the installation. *Id.* As one example, Dr. Hochwald indicated that a Bluetooth wireless network could be substituted for wireline one under appropriate circumstances such as when retrofitting an existing structure. *Id.* Menard expressly discloses the range of Bluetooth communication as 10

meters, and states the range can be extended through the use of devices such as repeaters or transceivers. Ex. 1004, 15:24–30, 18:1–20. Armed with this knowledge, a POSITA would be well-equipped to determine whether the distances involved in a particular surveillance area would permit the combination of Vaios’s system with Menard’s wireless technologies including Bluetooth, IEEE 802.11, IEEE 802.15.1 WPAN, and cellular or radio frequency communication systems. *Id.* at 34:18–28.

In addition, Patent Owner argues that Vaios “teaches away” from a wireless connection between its exterior module and local computer because of “bandwidth issues associated with sending uncompressed video files wirelessly.” PO Resp. 48 (citing Ex. 2012 ¶¶ 76–78). Patent Owner’s declarant, Dr. Akl, testified that “the raw data coming from the camera [in Vaios] has to be on a wire to get it to the computer that is then going to act on and compress it before it can do anything else with it.” *Id.* (citing Ex. 2011, 186:4–187:9).

Petitioner argues that Vaios’s compression to “avoid[] video stream difficulties” is an optional embodiment, and was not required for video transmission, nor was it mentioned as necessary in Vaios. Pet. Reply 5–6 (citing Ex. 1003, 2:34–41; Ex. 2013 ¶¶ 52–55, 58). Petitioner argues, and we agree, that this is not the “clear discouragement” required for “teaching away.” *Id.* at 5–6 (citing *Tyco Healthcare Grp. LP v. Ethicon Endo-Surgery, Inc.*, 774 F.3d 968, 977 (Fed. Cir. 2014)). We further note that the ’614 patent does not mention compression, so Patent Owner’s argument would require greater particularity of the prior art than is provided in the patent, which is an incorrect approach to obviousness. *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1570 (Fed. Cir. 1997) (“[T]he ’359 patent itself does not

disclose the level of detail that Lockwood would have us require of the prior art.”).

d) Conclusion on Motivation to Combine

Considering the foregoing, we determine that Petitioner has shown by a preponderance of the evidence that a person of ordinary skill in the art would have been motivated to combine Vaios, Menard, and Saylor with a reasonable expectation of success notwithstanding Patent Owner’s arguments. We proceed to consider whether the elements of claim 15 are taught or suggested by the combination.

5. Claim 1’s Recitations

Since claim 15, the subject of the challenge in ground 1, depends from claim 1, Petitioner first contends each limitation of claim 1 is taught or suggested by the combination of Vaios, Menard, and Saylor, as follows.

a) Preamble

Claim 1 begins with this preamble: “A communications and monitoring system, comprising.” Ex. 1001, 19:44. Petitioner asserts that, whether or not the preamble is limiting, Vaios discloses such a system. Pet. 8 (citing Ex. 1034 ¶¶ 97–100). Specifically, Petitioner notes that Vaios discloses a “multi-access remote system having a security surveillance area [and] a plurality of end user locations.” *Id.* (citing Ex. 1003, code (57)). Petitioner contends that Vaios explains that the security surveillance area comprises local computer system 12, camera 10 with a motion sensor, and network interface 6, and that when the motion sensor detects an obstruction the camera starts recording and the local computer system notifies a remote individual who can view video images using an end user location. *Id.* at 9 (citing Ex. 1003, code (57)).

Patent Owner does not argue that Vaios fails to teach the preamble of claim 1.

We agree with Petitioner that Vaios teaches the preamble of claim 1 because it teaches a system that surveils (monitors) an area, and notifies and provides video images (communicates) with an end user.

Consequently, it is unnecessary to reach the question of whether the preamble is limiting. *See, e.g., Catalina Marketing Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801 (Fed. Cir. 2002) (whether a preamble is limiting depends on various factors).

b) Wireless Device

Claim 1 of the ’614 patent recites limitation (a) as follows:

(a) a wireless device associated with a door and configured to communicate audio and video data;

Ex. 1001, 19:45–46. Petitioner contends that Vaios teaches this limitation. Pet. 9–13. Specifically, Petitioner asserts that Vaios discloses a “video camera 10” coupled to “local computer system 12” so that “video, sound, and motion sensor data can be transmitted from the camera to the local computer system.” *Id.* at 9 (citing Ex. 1003, 3:24–30, Fig. 1). Petitioner argues that Vaios discloses that “a monitoring site can be created to control viewing of . . . a house entrance” and that its cameras provides a “door view.” *Id.* at 9–10 (citing Ex. 1003, 7:62–8:4, 9:49–53; Ex. 1034 ¶ 102). Accordingly, Petitioner contends that Vaios teaches a device associated with a door that is configured to communicate video data and includes a camera for providing the video data. *Id.* at 10.

Petitioner asserts that video camera 10 is a “wireless” device as demonstrated by Vaios’s teaching that the video camera 10 communicates with local computer system 12 via a wireless connection. *Id.* (citing

Ex. 1034 ¶¶ 105–106). Petitioner argues that, in Vaios’s Figure 1, the squiggly line graphic denotes the connection between the video camera 10 and local computer system 12 via a wireless connection. *Id.* at 10.

Petitioner further notes that Vaios states that “connection 22” includes communication types that were commonly wireless (e.g., LAN, WAN, Internet, satellite). *Id.* (citing Ex. 1003, 3:19–23, 4:30–65).

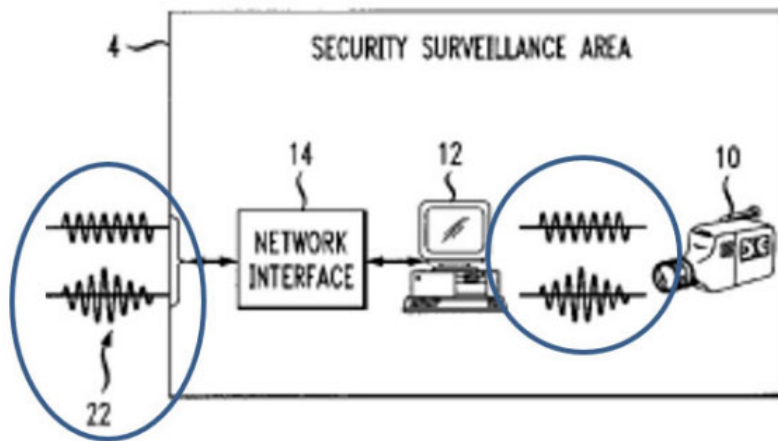
Accordingly, Petitioner contends that a person of ordinary skill in the art would have understood that the connections between Vaios’s video camera 10 and local computer system 12 included similar wireless connections as for connection 22, confirming that video camera 10 is a “wireless device.” *Id.* at 11 (citing Ex. 1034 ¶¶ 105–106).

Alternatively, Petitioner contends that it was obvious for camera 10 to be a “wireless device” since wired and wireless communications were well-known, interchangeable alternatives prior to the ’614 patent. *Id.* (citing Ex. 1034 ¶¶ 107–115). For example, Petitioner contends that, in the context of a “system and method for detecting and monitoring” (Ex. 1004, code (57)), Menard discloses a wireless device associated with a door and including a video camera 370. *Id.* (citing Ex. 1034 ¶¶ 108–111). Menard further discloses an “exterior module 200D” that is “mounted on the exterior of [a] residence and proximate to entry door 260.” *Id.* (citing Ex. 1004, 19:30–20:2, Figs. 7, 8). Petitioner notes that Menard teaches that “Module 200D is in wireless communication” with a plurality of devices including “PDUs 400A [and] 400B” and “base 250A.” *Id.* at 12 (citing Ex. 1004, 20:3–6). Petitioner notes that Menard’s module 200D provides audio and video data to PDUs 400. *Id.* (citing Ex. 1034 ¶ 110; Ex. 1004, 21:19–26, 22:14–23).

Petitioner further contends that, to the extent Vaios's cameras are not considered wireless devices, it was obvious to apply the wireless communications capabilities of Menard's exterior module 200D/video camera 370 to Vaios's video camera 10, thereby making Vaios's video camera 10 a "wireless device." *Id.* (citing Ex. 1034 ¶¶ 112–115).

Accordingly, Petitioner contends that Vaios, alone or with Menard, teaches the "wireless device" limitation (a) of claim 1. Pet. 13 (citing Ex. 1034 ¶¶ 101–116).

Patent Owner argues that Vaios does not disclose "a wireless device" as recited in claim 1. PO Resp. 23–35. In making this argument, Patent Owner reproduces a figure from the Petition, which is an excerpt of Vaios's Figure 1, shown below.

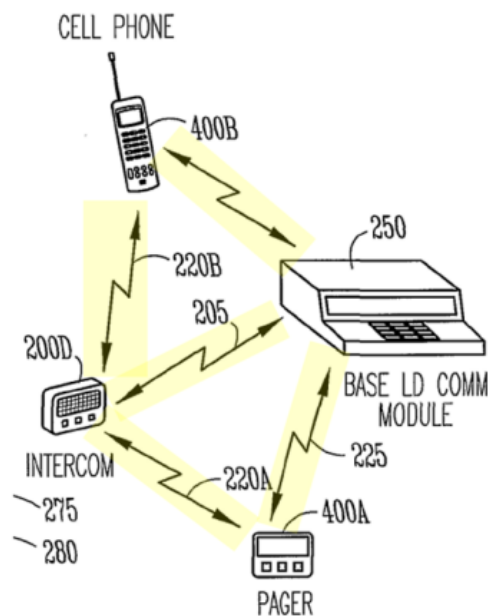


PO Resp. 23–24 (citing Pet. 10–11). Petitioner annotated Vaios's Figure 1 above to show squiggly line graphics (circled in blue) between the camera 10 and the local computer 12, and the network interface 14 and communications network 6 (network 6 is not shown in Petitioner's excerpt of Vaios's Figure 1 though it is in the original figure).

Patent Owner argues that the squiggly lines in Vaios's Figure 1 represent modulated signals, not wireless communications. PO Resp. 24–26

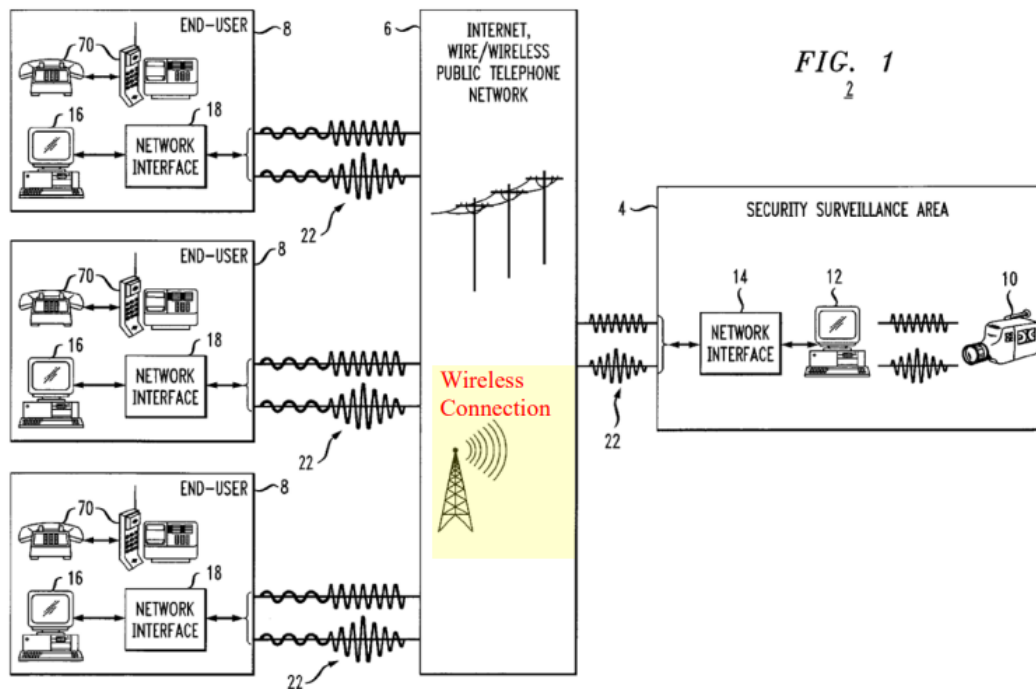
(citing Ex. 2012 ¶¶ 64–66; Ex. 2005, 136). Patent Owner argues that modulated signals are used in both wired and wireless connections, and are not indicative of either. *Id.* at 26. Patent Owner contends that a wireless connection would be represented by a lightning bolt or radiating shape icon. *Id.* (citing Ex. 2012 ¶¶ 67–69; Ex. 2004, 14).

By way of example, Patent Owner reproduces Menard’s Figure 7 below.



PO Resp. 27 (citing Ex. 2012 ¶ 70). Patent Owner indicates wireless connections represented by lightning bolts with yellow highlighting. *Id.*

Patent Owner also reproduces Vaio’s Figure 1 below.



Patent Owner shows an example of a radiating wave pattern highlighted in yellow in Vaios's Figure 1 above. PO Resp. 28 (citing Ex. 1003, Figure 1).

Patent Owner further argues that Dr. Akl opined that a POSITA would not conclude that the squiggly lines connecting local computer 12 and video camera 10 represent a wireless connection. *Id.* (citing Ex. 2012 ¶ 74).

Patent Owner asserts that Petitioner provides no explanation or evidence beyond Vaios to support that the squiggly line represents a wireless connection between Vaios's video camera 10 and local computer system 12. PO Resp. 28–29 (citing Pet. 10; Ex. 1003, 3:19–23, 4:30–65). Patent Owner argues that the Petition does not allege that the connection between the video camera 10 and local computer 12 could be done using LAN, WAN, Internet or satellite communications, and that these are generic descriptions that do not indicate wired or wireless connections. *Id.* at 29. Patent Owner further argues that it is unclear how you could wirelessly connect a video camera and local computer using a satellite network in 2001 or even now, and that

“[n]othing cited in the Petition provides any evidence of a wireless connection or wireless device.” *Id.*

We agree with Petitioner that Vaios’s use of the squiggly line graphic between the video camera 10 and local computer system 12, and the same graphic to indicate connection 22 between security surveillance area 4 and the communications network 6 which is described as “Internet, Wire/Wireless Public Telephone Network” at least suggests that the connection between video camera 10 and local computer system 12 would be wired or wireless as an option. Pet. 10–11; Pet. Reply 4; Ex. 1034 ¶¶ 105–106; Ex. 1003, 3:19–23, 4:30–65, Fig. 1; Ex. 2013 ¶¶ 47–51; Ex. 2012 ¶ 66. We also agree with Petitioner that Vaios’s camera adapter 116 is agnostic to whether the connection is wired or wireless. Pet. Reply 5 (citing Ex. 2012 ¶ 75; Ex. 1003, Fig. 2; Ex. 2013 ¶¶ 42–46). In addition, that the “remotely controllable cameras can be positioned at any location or scenic lookout” implies that they may be wireless. Ex. 1003, 9:57–61.

Patent Owner argues that Vaios “teaches away” from a wireless connection between video camera 10 and local computer system 12 because of bandwidth limitations. PO Resp. 29–31. We addressed this argument in § II.E.4.c and found that Vaios does not provide any “clear discouragement” that would undermine Petitioner’s showing.

Petitioner further notes that there were other ways for addressing low-bandwidth connections at the time, such as lowering the video quality. Pet. Reply 6 (citing Ex. 2013 ¶ 55; Ex. 1003, 9:21–26). Petitioner observes that the ’614 patent does not mention compression as necessary for wireless communications, and Patent Owner’s expert did not assert that compression was required. *Id.* (citing Ex. 2013 ¶ 58; Ex. 2011, 60:21–61:4). Petitioner

further presents evidence that wireless cameras were commercially available before the '614 patent's priority date. Pet. Reply 7 (citing Ex. 2013 ¶¶ 37–41, 54–57; Ex. 1003, 9:13–26; Ex. 1039, 2:46–65, 16:27–45, 19:36–55, 25:6–26, 25:38–26.; Figs. 32–35; Ex. 1040, 4:26–31; Exs. 1041–1046).

Patent Owner further argues that Menard does not disclose a “wireless device.” PO Resp. 31–35. Specifically, Patent Owner argues that Menard's module 200D communicates using Bluetooth technology, which, according to Patent Owner, was not capable of transmitting images or video before the '614 patent's priority date. *Id.* at 31–34 (citing Ex. 2012 ¶¶ 87–89, Ex. 2008, 2). Patent Owner asserts that Petitioner's expert, Dr. Hochwald, stated that it was “conceivable” to stream video using Bluetooth standards in 2003, but did not “have a strong opinion one way or the other” about it, which Patent Owner asserts is a “far cry” from the reasonable expectation of success alleged in the Petition. *Id.* at 34–35 (citing Ex. 2009, 38:11–18; Ex. 2012 ¶¶ 91, 94).

Petitioner disagrees with Patent Owner's arguments. Pet. Reply 7–10 (citing Pet. 11–13; Ex. 1034 ¶¶ 107–115). Specifically, Petitioner contends that Menard expressly describes exterior module 200D as providing wireless communication of real-time video images via Bluetooth. Pet. Reply 7–8 (citing Ex. 1004, 12:23–31, 13:27–29, 14:25–15:30, 16:1–12, 20:8–10, 20:20–22, 21:11–28; Ex. 1055, 79:24–80:3; Ex. 2011, 119:10–142:15). Petitioner asserts that Patent Owner acknowledges that Menard's lightning bolt symbols represent wireless communications sent from exterior module 200D. Pet. Reply 8 (citing PO Resp. 27). We agree that it is undisputed that the lightning bolt symbols in Menard represent wireless connections.

Petitioner disagrees with Patent Owner's assertion that Bluetooth Specification 1.1 did not discuss sending video or images wirelessly. *Id.* (citing Ex. 2013 ¶¶ 59–62, 68). Petitioner argues that Bluetooth Specification 1.1 described profiles such as File Transfer Profile and Basic Imaging Profile that could transmit “video or images.” *Id.* (citing Ex. 2013 ¶¶ 63–64; Ex. 2007, 260, 347, 667, 669; Ex. 1053, 371; Ex. 1052, 399–400, 507–516). Petitioner further asserts that the 802.15.1 WPAN standard at the time, which encompasses Bluetooth and is mentioned in Menard, contemplates video. *Id.* at 8–9 (citing Ex. 1004, 15:1–10; Ex. 2013 ¶ 66; Ex. 1049, 204, 358, 360). Petitioner further contends that contemporary publications discussed transmitting images and video via Bluetooth. *Id.* at 9 (citing Ex. 2013 ¶¶ 65–66; Ex. 1047, 7:25–37; Ex. 1048, 8:28–10:2, Fig. 2; Ex. 1038, 84). Petitioner contends that Patent Owner's expert described an iPAQ device as sufficient for “wireless video playback,” demonstrating Bluetooth's viability for transmitting images and video. *Id.* (citing Ex. 2012 ¶ 48; Ex. 2013 ¶ 62). Accordingly, Petitioner contends that a POSITA would have recognized that Bluetooth was suitable for sending images and video. *Id.* (citing Ex. 2013 ¶¶ 60–66, 68).

Petitioner further contends that Menard never limits options for wirelessly communicating video or images only to Bluetooth, and describes other suitable options such as wireless LANs, WANs, etc. *Id.* at 9–10 (citing Ex. 2013 ¶¶ 23–36, 67; Ex. 1034 ¶¶ 106–107; Ex. 2011, 167:12–168:8; Ex. 1039, code (57), 19:34–63, 22:42–23:22, 26:21–39, 27:25–28:2; Ex. 2011, 33:17–35:15; Ex. 1055, 33:12–22).

The record supports Petitioner's showing that a POSITA would have incorporated Menard's wireless transceivers into Vaio's system to provide a

wireless connection between the video camera and local computer system. Pet. 11–13 (citing Ex. 1034 ¶¶ 107–116). Specifically, we find that Menard’s wireless transceiver 150 of module 200 and wireless connection 205 would have supported communication of images and video between Vaios’s video camera and local computer system via Bluetooth or IEEE 802.15.1 WPAN standard as taught by Menard. Ex. 1004, 12:23–31, 13:27–29, 14:25–15:30, 16:1–12, 20:8–10, 20:20–22, 21:11–28. Bluetooth Specification 1.1 specifically mentions video and is dated February 2001, and thus before the ’614 patent’s priority date. Ex. 2007, 260, 347, 667, 669. There is no dispute that wireless video cameras were commercially available before the ’614 patent’s priority date. Ex. 2013 ¶¶ 37–41, 54–57; Ex. 1003, 9:13–26; Ex. 1039, 2:46–65, 16:27–45, 19:36–55, 25:6–26, 25:38–26:12, Figs. 32–35; Ex. 1040, 4:26–31; Exs. 1044–1045. Moreover, the patents and publications that Petitioner proffers show that wireless video cameras using Bluetooth and IEEE 802.15.1 WPAN to transport video were used before the ’614 patent’s priority date. Ex. 2013 ¶¶ 65–66; Ex. 1047, 7:25–37; Ex. 1048, 8:28–10:2, Fig. 2; Ex. 1038, 84. From this information, we find that a POSITA would have had a reasonable expectation of success in implementing a wireless connection between Vaios’s video camera and local computer system, contrary to Patent Owner’s argument. PO Resp. 31–34.

Patent Owner asserts that Vaios’s video camera is not a “wireless device” because the local computer system has the storage, processing and compression capabilities as well as audio/video code 114 and camera adapter 116, and that these features would be in the video camera if it was wireless. PO Resp. 8. Petitioner provides evidence, however, that the term

“camera adapter” is agnostic to whether the connection is wired or wireless. Specifically, Petitioner points to the priority application for the ’614 patent, U.S. Provisional 60/418,384, which mentions an “adapter card” that is wireless, which suggests that the term connotes neither a wired nor wireless connection. Pet. Reply 5 (citing Ex. 2012 ¶¶ 75; Ex. 1003, Fig. 2; Ex. 2013 ¶¶ 42–46). We agree with Petitioner’s assessment for the reasons Petitioner mentions.

Patent Owner also asserts that Vaios’s teaching of compressing video at the local computer system implies that the connection between the video camera and local computer system is wired, not wireless. PO Resp. 30 (citing Ex. 2012 ¶¶ 76–79). However, neither Menard nor the ’614 patent mention compression, suggesting that it was not an issue for wireless transmission. Pet. Reply 5–7. Saylor compresses recorded images “to reduce the amount of data that may be stored in a database,” not because of the bandwidth limitations of a wireless connection. Ex. 1008, 15:17–20, Fig. 10. Petitioner also mentions the possibility that the low-bandwidth connection (such as dial-up Internet) is between Vaios’s local computer system and the remote user location, and not between the video camera and local computer system, which is why compression is performed at the local computer system before transmission to the end user locations. Pet. Reply 6 (citing Ex. 2013 ¶¶ 56–57).

From this evidence, we conclude that Vaios suggests that the connection between Vaios’s video camera and local computer system would have been wired or wireless since those connection types are mentioned for Vaios’s network, and because use of Vaios’s video cameras “at any location or scenic lookout” suggests that the connection would be wireless in some

scenarios. Ex. 1003, 9:57–61, Fig. 1. Menard explicitly teaches wireless transceivers and wireless connection that a POSITA would have understood to be useful in implementing a wireless connection between Vaios’s video camera and local computer system. Ex. 1004, 12:23–31, 13:27–29, 14:25–15:30, 16:1–12, 20:8–10, 20:20–22, 21:11–28. Since the video camera of the combination communicates wirelessly, it is a “wireless device.”

Petitioner has shown persuasively that Vaios alone or with Menard suggests the “wireless device” limitation (a) of claim 1 notwithstanding Patent Owner’s arguments.

c) Peripheral Devices

Claim 1 of the ’614 patent recites limitation (b) as follows:

(b) a plurality of peripheral devices, each peripheral device associated with a respective user; and.

Ex. 1001, 19:47–48. Petitioner contends that Vaios discloses limitation (b). Pet. 13–16. Specifically, Vaios discloses a plurality of peripheral devices (“remote computer system” and/or “communicative devices” of “end user locations 8”) which are each associated with a respective user (“remote individual”). *Id.* at 13 (citing Ex. 1034 ¶¶ 118–123; Ex. 1003, code (57), 2:26–33, 4:5–20, 8:55–9:9). Petitioner asserts that Vaios’s “end user locations 8” include “remote computer system 16” and “communicative devices 20” such as “a telephone, beeper, fax, e-mail, or wireless device.” *Id.* at 13–14 (citing Ex. 1003, code (57), 4:5–20).

Petitioner contends that these “end user locations” and devices are associated with respective users. *Id.* at 14 (citing Ex. 1034 ¶¶ 120–123). Petitioner quotes Vaios as stating “[u]sing an end user location, having a remote computer system . . . and . . . communications devices, the remote

individual can...control the video camera remotely, or view video images.” *Id.* (citing Ex. 1003, code (57)). Petitioner asserts that multiple individuals can access Vaios’s system because Vaios states that “this system . . . can additionally be secured . . . to allow access only to certain individuals.” *Id.* (citing Ex. 1003, 9:61–64). Petitioner alleges that because “communicative devices 20” include personal devices typically associated with a respective individual (e.g., “beeper,” “e-mail,” “wireless device”) and Vaios’s system includes multiple such devices to provide access to multiple individuals, Vaios teaches or renders obvious a plurality of peripheral devices each associated with a respective user. *Id.* (citing Ex. 1034 ¶ 123).

Alternatively, Petitioner contends that it was obvious for Vaios’s peripheral devices to each be associated with a respective user in view of Saylor. Pet. 14 (citing Ex. 1034 ¶¶ 124–131). Petitioner asserts that Saylor discloses a system that automatically informs an owner and other authorized entities when alarm situations occur. *Id.* (citing Ex. 1008, 1:7–12). Petitioner states that users in Saylor register security devices with a central security network. *Id.* (citing Ex. 1008, 3:49–50). Petitioner argues that the system accesses the user’s personal preferences and/or other information to execute notifications in the manner specified by the user. *Id.* at 14–15. Petitioner asserts that the user may identify contact information, contact individuals, methods of communication, order of contact, and special instructions. *Id.* at 15 (citing Ex. 1008, 3:51–58).

Petitioner notes that Saylor states that, based on user information retrieved from databases, central security network 130 may contact one or more users 160 or other identified contacts 162₁–162_N as specified by the user. *Id.* (citing Ex. 1008, 7:45–51). Petitioner contends that these

databases include “user database 140” that stores a personal address book where contact information (e.g., phone, pager, mobile device, etc.) associated with various individuals may be stored and accessed based on various identified alarm situations. *Id.* (citing Ex. 1008, 7:3–7). Accordingly, Petitioner states that Saylor discloses peripheral devices (phone, pager, mobile device) to which alarm notifications are sent and which are each associated with a respective individual via the address book in “user database 140.” *Id.* (citing Ex. 1034 ¶¶ 124–126).

For the foregoing reasons, Petitioner contends that Vaios, alone or with Saylor, teaches “peripheral devices” limitation (b) of claim 1. *Id.* (citing Ex. 1034 ¶¶ 117–132).

Patent Owner does not argue that the combination of Vaios, Menard, and Saylor discloses limitation (b).

Reviewing the evidence, Petitioner has shown that Vaios alone or with Saylor teaches limitation (b) of claim 1.

d) Computer

Claim 1 further recites limitation (c) as follows:

(c) a computer configured for communication with the wireless device and configured for communication with each of the peripheral devices.

Petitioner contends that Vaios discloses a computer (“local computer system 12”) configured for communication with the wireless device (“video camera 10”) and configured for communication with each peripheral device (“remote computer system” / “communicative devices” of “end user locations 8”). Pet. 16 (citing Ex. 1003, 3:24–36, Fig. 1; Ex. 1034 ¶ 134).

Petitioner notes that Vaios discloses that “local computer system 12” is coupled to video camera 10 so that video, sound, and motion sensor data

can be transmitted from the camera to the local computer system, and instructions or other data can be transmitted from the local computer system to the video camera. *Id.* at 17 (citing Ex. 1003, 3:27–32; Ex. 1034 ¶ 139). Petitioner contends that Vaios teaches, or renders obvious in combination with Menard, that such communications are wireless. *Id.*

Petitioner contends that local computer system 12 also communicates with end user locations 8 and associated devices. *Id.* (citing Ex. 1034 ¶¶ 140–142). Local computer system 12 includes various components for performing communications between the local computer system and the end-user locations. *Id.* (citing Ex. 1003, 3:32–36, 3:44–48). Petitioner contends that communications (e.g., beeper messages, telephone calls, or e-mails) sent by the local computer system may be received by the remote individual. *Id.* at 18 (citing Ex. 1003, 8:59–62).

Petitioner thus contends that Vaios alone or in combination with Menard, satisfies the “computer” limitation (c) of claim 1. *Id.* (citing Ex. 1034 ¶¶ 133–143).

Patent Owner does not dispute Petitioner’s contentions concerning limitation (c).

Petitioner has shown persuasively that Vaios, alone or in combination with Menard, teaches the “computer” limitation (c) of claim 1.

e) Software

Claim 1 recites limitation (d) as follows:

(d) wherein the computer executes software, in accordance with which,

various recited operations are performed. Ex. 1001, 19:52–53. Petitioner contends that the local computer system 12 executes software. Pet. 18 (citing Ex. 1034 ¶¶ 135–138). Petitioner contends, for example, that local

computer system 12 includes operating system software 111 to provide basic resource allocation and computational mechanisms. *Id.* (citing Ex. 1003, 18:25–26, 3:51–4:4). The local computer system comprises application software 136 to handle customized tasks unique to each embodiment of the multi-access system, and browser software 138 for display control and management. *Id.* (citing Ex. 1003, 3:65–4:4).

Petitioner thus contends that Vaios discloses “software” limitation (d) of claim 1. *Id.* (citing Ex. 1034 ¶¶ 135–138, 143).

Patent Owner does not dispute Petitioner’s contention that Vaios discloses limitation (d).

Petitioner has shown that claim 1’s “software” limitation (d) is taught by Vaios.

*(1) Maintaining Association of Each Peripheral
Device with Respective User*

Claim 1 recites limitation 1(d)(i) as follows:

(i) the association of each of the peripheral devices with a respective user is maintained,

Ex. 1001, 19:54–55. Petitioner refers to this as limitation (e). Pet. 18. Petitioner contends that, using software, local computer system 12 maintains an association of each peripheral device (devices of “end user location 8”) with a respective user (“remote individual”). *Id.* (citing Ex. 1034 ¶¶ 144–145).

Upon receipt of video from camera 10, Petitioner notes that Vaios’s local computer system 12 notifies and provides the video to the remote individual via the remote computer system and/or communicative devices of the end user location. *Id.* at 19 (citing Ex. 1034 ¶¶ 146–147; Ex. 1003,

8:53–62, Fig. 4 (step 310)). The local computer notifies a remote individual at a predetermined address. *Id.* (citing Ex. 1003, Fig. 4 (step 310)).

According to Petitioner, the “predetermined address” of step 310 refers to an address of a communicative device of end user location 8 that is known and maintained by local computer system 12 in order to provide notifications and data to a specific remote individual. Pet. 20 (citing Ex. 1034 ¶¶ 147–149). Petitioner contends that this understanding is informed by subsequent step 312, in which the remote individuals receive the notification via e-mail, beeper, etc. which are each exemplary communicative devices of end user locations 8. *Id.* (citing Ex. 1003, code (57), 2:26–33, 4:5–20, 8:59–9:5, Fig. 4). Petitioner contends that Vaios’s claim 17 also teaches that notifying a remote individual is performed via a communication device so as to make available to said remote individual a view of the obstruction of the video camera triggering an alert. *Id.* (citing Ex. 1003, claim 17).

Petitioner contends that, accordingly, Vaios’s local computer system 12 maintains an association of a communicative device (telephone, beeper, email, wireless device, remote computer system) and/or the remote computer system with a remote individual at least through the stored “predetermined address” for the individual’s device. *Id.* (citing Ex. 1034 ¶ 150). Local computer system 12 maintains this association to provide notifications and associated video data to the remote individual at the corresponding communication device using the “predetermined address.” *Id.*

Alternatively, Petitioner contends, it was obvious for local computer system 12 to maintain an association of each peripheral device with a respective user in view of Saylor. *Id.* at 20–21 (citing Ex. 1034

¶¶ 151–158). Petitioner contends that Saylor teaches a database that stores an address book which maintains associations between peripheral devices and respective individuals so that alarm notifications can be provided to desired individuals via respective associated devices. Pet. 21.

Petitioner contends it was obvious to similarly maintain associations between Vaios’s peripheral devices (e.g., remote computer system and/or communicative devices) with respective individuals as taught in Saylor so that Vaios’s system could similarly provide notifications and video to specific desired individuals via their associated peripheral devices as discussed above. *Id.* (citing Ex. 1034 ¶¶ 154–158).

Accordingly, Petitioner contends that Vaios, alone or with Saylor, teaches limitation 1(d)(i) of claim 1.

Patent Owner does not dispute Petitioner’s contentions concerning limitation 1(d)(i).

After review of the evidence, we determine that Petitioner has shown that Vaios alone or with Saylor teaches limitation 1(d)(i) of claim 1.

*(2) Computer Receives Audio and Video Data
from Wireless Device*

Claim 1 recites limitation 1(d)(ii) as follows:

(ii) audio and video data from the wireless device is received by the computer, and

Ex. 1001, 19:54–55. Petitioner refers to this as limitation (f). Pet. 21.

Petitioner contends that Vaios discloses, or renders obvious in combination with Menard, that the device wirelessly communicates with the computer.

Id. Petitioner states that Vaios discloses that local computer system 12 executes software to enable its functionalities. *Id.*

Petitioner asserts that these functionalities include receiving audio and video data from the wireless device (video camera 10) upon actuation of the motion sensor. *Id.* at 21–22 (citing Ex. 1034 ¶¶ 161–163). Petitioner contends, for example, that video, sound, and motion sensor data can be transmitted from the camera to the local computer system. *Id.* (citing Ex. 1003, 2:12–17, 3:24–30, 9:2–6, Fig. 1).

Accordingly, Petitioner argues that Vaios, alone or with Menard, teaches this limitation. *Id.* at 22 (citing Ex. 1034 ¶¶ 160–164).

Patent Owner does not dispute Petitioner’s contentions regarding this limitation.

After reviewing the evidence, we determine that Petitioner has shown that Vaios alone or with Menard teaches limitation 1(d)(ii) of claim 1.

(3) *Graphical User Interface*

Claim 1 recites limitation 1(d)(iii) as follows:

(iii) a graphical user interface is provided through which audio and video data from the wireless device is accessible by each respective user using one of the peripheral devices.

Ex. 1001, 19:54–55. Petitioner refers to this as limitation (f). Pet. 21.

Petitioner contends that Vaios discloses this limitation. Pet. 22 (citing Ex. 1034 ¶¶ 165–178).

Petitioner contends that audio and video from Vaios’s video camera 10 is provided from local computer system 12 to peripheral devices (remote computer system and/or communicative devices of end user locations 8). *Id.* (citing Ex. 1034 ¶ 166; Ex. 1003, 8:63–9:5).

Petitioner contends that Vaios discloses that, employing the browser software, the remote individual can operate the camera and retrieve video and sound. *Id.* (citing Ex. 1003, 8:65–9:5). Petitioner asserts that the remote

individual accesses such audio and video using the remote computing system and/or communicative devices of end user locations 8. *Id.* (citing Ex. 1034 ¶ 167). Petitioner alleges, for example, using an end user location, having a remote computer system, a network interface, and communications devices, the remote individual can logon to the local computer system to view video images. *Id.* at 22–23 (citing Ex. 1003, code (57)). Petitioner contends that Vaios’s local computer system is electronically connected to the video camera so that video and sound can be transmitted from the camera to the local computer system and the local computer system captures video and transmits it to the remote user who subsequently plays the downloaded image. *Id.* at 23 (citing Ex. 1003, 2:12–15, 2:35–38, 3:24–36).

Petitioner contends that audio and video data is presented on the peripheral devices via a graphical user interface provided by software of local computer system 12. *Id.* (citing Ex. 1034 ¶¶ 170–176). According to Petitioner, this user interface is presented across the Internet via browser and application software, which are components of “interface layer 102” of local computer system 12. *Id.* (citing Ex. 1003, 6:35–40, 7:39–43, Fig. 2). Petitioner argues that Vaios’s Figure 3 depicts an example of a graphical user interface provided via application specific Internet browser 200. *Id.* at 23–24.

Petitioner contends that the graphical user interface of Vaios’s Figure 3 incorporates application specific functions such as video display, and remote operation of video camera 10. *Id.* at 24. According to Petitioner, Vaios’s Figure 3 shows the display screen of browser 200 which comprises a video display area 232. *Id.* Petitioner asserts Vaios’s video display area 232 is a portion of the browser display screen where all video

images and recordings are visibly displayed to the end user. *Id.* (citing Ex. 1003, 7:40–59). Petitioner notes that the graphical user interface further includes volume control icon 218, demonstrating that audio is present on the user interface. *Id.* (citing Ex. 1003, 8:8–10, Fig. 3; Ex. 1034 ¶ 174).

Petitioner contends that Vaios’s claims demonstrate that the remote individual accesses audio and video data using a graphical user interface presented by the devices of the end user locations. *Id.* at 25. For example, Vaios’s claim 10 recites that “said controller module . . . comprises . . . browser software for interfacing said controller module with an end-user at said end-user location, said browser software further providing, said user interface.” *Id.* at 25 (citing Ex. 1001, 10:63–67 (claim 10)).

Accordingly, Petitioner contends that Vaios discloses limitation 1(d)(iii) of claim 1. Pet. 22 (citing Ex. 1034 ¶¶ 165–178; Ex. 1003, code (57), 2:12–15, 2:35–38, 3:24–36, 6:35–40, 7:39–59, 8:8–10, 8:63–9:5, Figs. 2, 3).

Patent Owner does not dispute Petitioner’s contention that Vaios discloses limitation 1(d)(iii) of claim 1.

Petitioner has shown persuasively that Vaios discloses the “graphical user interface” limitation 1(d)(iii) of claim 1.

6. *Claim 15*

Claim 15 depends from claim 1 and recites “wherein the wireless device is portable, has a locking mechanism, and an electrical receptacle for quickly attaching to a source of electricity, and wherein the wireless device further includes a portable energy source.” Ex. 1001, 20:57–61. Petitioner contends that Menard discloses a wireless device (e.g., exterior module

200D) having each of the additional elements recited in claim 15. Pet. 25 (citing Ex. 1034 ¶¶ 179–196; Ex. 1004, 21:15, 13:27–29, 22:25–28, 23:6–8).

Petitioner contends that Menard’s exterior module 200D is “portable.” Pet. 26 (citing Ex. 1034 ¶¶ 181–184). For example, Petitioner contends that Menard’s exterior module 200D has a transceiver that communicates wirelessly with other components of the system, and is battery powered so that it can be easily moved. *Id.* (citing Ex. 1004, 20:5–12, 21:15, 13:27–29; Ex. 1034 ¶ 184).

Alternatively, Petitioner contends it would have been obvious that the exterior module 200D is portable and thus may be relocated as desired, for example, to other entry ways a user may desire to monitor. *Id.* at 27. Petitioner asserts that such portability was easily and predictably achieved with a reasonable expectation of success by simply moving exterior module 200D to another entryway, with minimal reinstallation effort given the wireless communication and battery power supplies already included with Menard’s exterior module 200D. *Id.*

Petitioner contends that claim 15’s portability limitation requires nothing more than was taught or rendered obvious by Menard. We agree. Petitioner has shown persuasively that the “portable” limitation of claim 15 is taught by Menard.

Petitioner contends that, under Patent Owner’s interpretation of “locking mechanism,” Menard’s exterior module 200D includes a “locking mechanism” at least in the form of its ability to operate “deadbolt lock 275.” Pet. 27 (citing Ex. 1034 ¶¶ 185–187; Ex. 1004, 22:4–10). Petitioner contends that Menard’s exterior module 200D is capable of engaging and disengaging a lock, which satisfies the “locking mechanism” limitation

under Patent Owner’s interpretation of this term. *Id.* at 28. Petitioner has shown persuasively that the “locking mechanism” limitation of claim 15 is taught by Menard.

As to the “electrical receptacle” limitation of claim 15, Petitioner contends that Menard’s exterior module 200D includes an electrical receptacle for quickly attaching to a source of electricity. Pet. 28 (Ex. 1034 ¶ 188). For example, Petitioner asserts that Menard teaches that power to the exterior module 200D is supplied by a battery or derived from the metered electric service. *Id.* (citing Ex. 1004, 23:6–8, 22:22–25). Petitioner argues that exterior module 200D would include an electrical receptacle to which the battery contacts are electrically coupled. *Id.* (citing Ex. 1034 ¶ 188).

Alternatively, Petitioner contends that it was obvious for Menard’s exterior module 200D to include an electrical receptacle for quickly attaching to a source of electricity given Menard’s use of a battery to power exterior module 200D. Pet. 29 (citing Ex. 1034 ¶ 190). Petitioner asserts that, given the widespread use of batteries for cameras/monitoring devices as well as innumerable electronic devices, one would have found it obvious to use any of a plethora of electrical receptacles for connecting to and/or recharging such batteries, and would have been motivated to include an electrical receptacle in the exterior module to facilitate quick electrical attachment/connection to such batteries, and/or to power the device when another source of power is readily available such that the battery power is preserved for only when needed. *Id.* Petitioner argues that use of such receptacles would have been easily achieved with a high expectation of success given the widespread use of batteries and corresponding electrical

receptacles at the time. *Id.* Petitioner contends that this is a common feature in everyday household items such as in-home smoke detectors, which regularly incorporate an electrical receptacle for powering the detector in normal use, while also incorporating batteries as a back-up for when the regular power source is unavailable. *Id.*

Petitioner further contends that Menard’s exterior module 200D includes a “portable energy source” at least in the form of a battery. Pet. 30 (citing Ex. 1034 ¶ 191; Ex. 1004, 22:24–28). For example, Petitioner contends that Menard explicitly describes the exterior module 200D as battery operated. *Id.* (citing Ex. 1004, 22:27–28). Petitioner asserts that a person of ordinary skill in the art would have recognized that such a battery is a “portable energy source,” thereby satisfying this claim limitation. *Id.* (citing Ex. 1034 ¶ 191).

Petitioner shows persuasively that Menard teaches claim 15’s “electrical receptacle” limitation.

Patent Owner does not dispute that the limitations of claim 15 are disclosed by the combination of Vaios, Menard, and Saylor.

Petitioner has shown persuasively that Menard teaches the limitations of claim 15.

7. *Conclusion for Ground 1*

Petitioner has shown that a person of ordinary skill in the art would have had reason to combine the prior art references, with a reasonable expectation of success in arriving at claim 15. Furthermore, Petitioner has shown that each limitation of claim 15 (including claim 1) of the ’614 patent is taught or at least suggested by the combination of Vaios, Menard, and Saylor, and rendered obvious thereby. Accordingly, Petitioner has shown by

a preponderance of the evidence that claim 15 is unpatentable as obvious over the combination of Vaio, Menard, and Saylor.

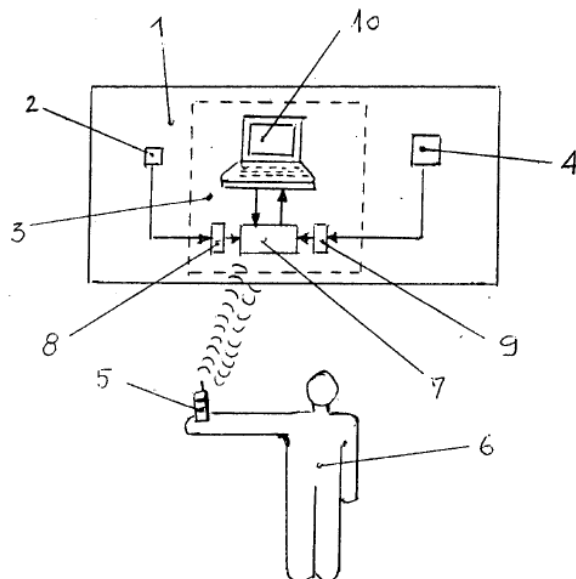
F. Ground 2: Alleged Obviousness of Claim 14 over Vaios, Menard, Saylor, and Sabie

Petitioner contends that Claim 14 of the '614 patent is obvious over the combination of Vaios and Sabie, optionally with Menard and/or Saylor. Pet. 33–39.

1. Overview of Sabie (Ex. 1035)

Sabie is titled “[m]ethod and device for remote control and remote monitoring via [a] short message service.” Ex. 1035, code (54). Sabie relates to a device for remote control and remote monitoring and control of sensors, including motion sensors and video cameras, via a short message service (SMS). *Id.* at code (54), 6–7. Sabie refers to “both the information process and the remote control & administrative process, as method and device, based on any mobile phone network’ Short Message Service (SMS).” *Id.* at 1.

Sabie's Figure 6 is reproduced as follows:



Sabie's Figure 6 above illustrates "area of interest 1," "sensor or measuring devices 2," "control[led] certain devices or plants 4," "mobile phone 5," "user 6," and "device for applying the method 3," which includes "two-way pager 7...or any other device capable to transmit receive an SMS message," "reception interface 8," and "control interface 9." Ex. 1035, 3–4. In Sabie's system, a user transmits SMS messages to and from its mobile phone to control devices remotely in the area of interest. *Id.* at 1–2.

2. *Motivation to Combine*

Petitioner contends it would have been obvious to a person of ordinary skill in the art to use text messaging for communication between the wireless devices and peripheral devices of Vaios (either alone or as combined with the teachings of Menard and/or Saylor) in view of the Sabie's teachings, because text messaging is a well-known species of wireless communications. Pet. 36–37 (citing Ex. 1034 ¶¶ 205–211). Petitioner contends that the modification of Vaios would have amounted to simply applying a known technique to improve a device in a predictable manner (e.g., using SMS/text messaging to provide a fast, simple, and low-cost manner of communication between Vaios's cameras and peripheral devices). *Id.* at 37 (citing Ex. 1034 ¶ 206; *KSR*, 550 U.S. at 417).

Alternatively, Petitioner contends that modification of Vaios would have been a simple combination of known elements (e.g., the SMS messaging used to communicate between Sabie's devices 2, 3 and its mobile phone 6 with Vaios's system and devices) in a known manner to yield predictable results. *Id.* (citing Ex. 1034 ¶ 207). Petitioner asserts that such a modification would have amounted to simple substitution of Sabie's SMS messaging to communicate data from its cameras 10 to its peripheral devices

(e.g., remote computer system and communicative devices 20). *Id.* (citing Ex. 1034 ¶ 208). Petitioner argues that a person of ordinary skill in the art would have recognized that Sabie's teachings could be used to communicate data from Vaios's video cameras to its communicative devices 20 (such as remote computers and mobile devices including mobile phones) via SMS messaging. *Id.* at 38.

Petitioner alleges that the combination or substitution would have been easily accomplished with predictable results and having a reasonable expectation of success. *Id.* at 38 (citing Ex. 1034 ¶ 209). Petitioner contends that SMS or text messaging was one of a variety of communication methods that was widely implemented for remote communication at the time of the alleged invention, particularly for communication with mobile phones over cellular networks. *Id.* (citing Exs. 1036, 1037). According to Petitioner, using such a known method of communicating data to provide communications between camera and/or other wireless device and a remote mobile phone or other peripheral device would have provided no significant or concerning impediments that would have prevented successful implementation of such communications, particularly in view of Sabie's teachings. *Id.*

Petitioner further contends that a person of ordinary skill in the art would have been motivated to incorporate Sabie's text messaging communications into Vaios's system for a number of reasons. *Id.* at 38–39 (citing Ex. 1034 ¶ 210). According to Petitioner, a person of ordinary skill in the art would have recognized the SMS messaging offered a fast, simple, and low-cost manner of communicating information. *Id.* at 39 (citing Ex. 1034 ¶ 210). Furthermore, Petitioner contends that a person of ordinary

skill in the art would have recognized that using SMS messaging afforded a communication method in which a user was not required to actively receive/accept communications real-time as with a phone call or other real-time two-way communication, thereby increasing the convenience and effectiveness of communicating data, alerts, etc. *Id.* (citing Ex. 1034 ¶¶ 210–211; Ex. 1037, 3:15–25).

Beyond the arguments discussed in ground 1 (§§ II.E.4 and II.E.5.b), Patent Owner does not dispute the combination.

Petitioner has shown by a preponderance of evidence that a person of ordinary skill in the art would have combined Vaios and Sabie, optionally with Menard and/or Saylor (for the reasons explained in § II.E.4), with a reasonable expectation of success in arriving at the system of claim 14.

3. *Claim 14*

Claim 14 depends from claim 1 and recites “wherein the wireless device and at least one of the peripheral devices are configured for communications via text messaging.” Ex. 1001, 20:53–56. Petitioner contends that this limitation is taught by Sabie, and provides reasons to combine Sabie with Vaios, and optionally Menard and/or Saylor. Pet. 33–39. The limitations of claim 1 incorporated into claim 14 have already been addressed above in the discussion of obviousness of claim 15 over Vaios, optionally combined with Menard and/or Saylor, in ground 1. *See* § II.E.5.

Specifically, Petitioner contends that Sabie teaches a wireless device (e.g., “sensors/measuring devices 2” and/or “device for applying the method 3”) and a peripheral device (e.g., “mobile phone 5”) configured for communications via text messaging. *Id.* at 33 (citing Ex. 1034 ¶¶ 199–204;

Ex. 1035, code (57), 1:3–5:2, Fig. 1). Petitioner asserts that communication via short message service (SMS) is equivalent to communications via text messaging. *Id.* (citing Ex. 1034 ¶ 199; Ex. 1036, 1:25–31).

Petitioner contends that Sabie’s system uses SMS messages to communicate data regarding certain parameters from a long distance area of interest through sensors or measuring devices. *Id.* at 34 (citing Ex. 1035, code (57)). Parameters are measured using sensors or measuring devices which transmit the measured data to the device which transforms the data and sends it to a two-way pager and mobile phone via SMS messages over a mobile phone network. *Id.* (citing Ex. 1035, 3:30–4:2). When the user receives the data, the user may send SMS control messages through the mobile phone network to a controllable device in the area of interest. *Id.* at 34–35 (citing Ex. 1034 ¶¶ 199–201; Ex. 1035, code (57), 3:27–4:11). Petitioner further notes that Sabie discloses that the sensors/measuring devices 2 may include wireless monitoring devices such as video cameras, temperature sensors, motion sensors, touch sensors, etc. *Id.* at 35 (citing Ex. 1034 ¶ 202; Ex. 1035, 4:31–5:2, 6:3–9; 7:3–8). Petitioner contends that a person of ordinary skill in the art would have recognized that Sabie uses wireless devices communicating with text messaging. *Id.* at 36 (citing Ex. 1034 ¶¶ 203–204; Ex. 1035, 4:37–38).

We agree with Petitioner that the combination of Vaios and Sabie, optionally with Menard and Saylor, teaches all of the limitations of claim 14.

4. Conclusion for Ground 2

Petitioner has shown that each limitation of claim 14 is taught or suggested by the combination of Vaios and Sabie, optionally with Menard and/or Saylor, and that a person of ordinary skill in the art would have had

reasons to combine the prior art references, with a reasonable expectation of success in arriving at the system of claim 14. Accordingly, Petitioner has shown by a preponderance of the evidence that claim 14 is unpatentable as obvious over the combination of Vaios, Menard, Saylor, and Sabie.

G. Ground 3: Alleged Obviousness of Claim 14 over Vaios, Menard, Saylor, and Jae

Claim 14 depends from claim 1. Ex. 1001, 20:53–56. Petitioner contends that Vaios anticipates or renders claim 1 obvious in combination with Menard and/or Saylor. Pet. 39. Petitioner contends that claim 14 of the '614 patent is obvious over the combination of Vaios and Jae, optionally with Menard and/or Saylor. *Id.* at 39–48.

1. Overview of Jae (Ex. 1011)

Jae relates to a “remote access security system, composed of an outdoor terminal for visitors, installed at the entrance door . . . , equipped with a camera, a liquid crystal display screen, a speaker, a microphone, and various operation buttons to enable the visitor to call.” Ex. 1011, codes (54, 57). Jae’s system displays and communicates via wireless text messages. *Id.* at 4–5.

2. Motivation to Combine

Petitioner contends that it was obvious to a person of ordinary skill in the art at the time of the alleged invention to use text messaging for communication between the wireless devices and peripheral devices of Vaios (either alone or as combined with the teachings of Menard and/or Saylor) in view of the teachings of Jae for the same reasons as discussed above for combining Sabie and Vaios. Pet. 46 (citing Ex. 1034 ¶¶ 219–224).

Petitioner contends that such a modification of Vaios would have merely amounted to applying a known technique to improve a device in a predictable manner (e.g., using text messaging as taught in Jae to provide a fast, simple, and low-cost manner of communication between Vaios's cameras and peripheral devices). *Id.* (citing Ex. 1034 ¶ 220).

Alternatively, Petitioner contends that such a modification of Vaios would have merely amounted to a simple combination of known elements (e.g., the text messaging between outdoor terminal 100 and mobile phone of Jae with Vaios's system and devices) in a known manner to yield predictable results. *Id.* (citing Ex. 1034 ¶ 221).

Petitioner contends that such a combination or substitution would have been easily accomplished with predictable results and having a reasonable expectation of success. Pet. 47 (citing Ex. 1034 ¶ 223). According to Petitioner, text messaging was widely implemented for remote communication at the time of the alleged invention, and there were no significant or concerning impediments that would have prevented successful implementation of such communications, particularly in view of the Jae's teachings. *Id.* Petitioner further contends that a person of ordinary skill in the art would have been motivated to incorporate Jae's text messaging communications into Vaios's system because a person of ordinary skill in the art would have recognized that communicating using such text messages offered a fast, simple, and low-cost manner of communicating information. *Id.* at 47–48 (citing Ex. 1035, 2:19–29; Ex. 1034 ¶ 224). Petitioner also contends that a person of ordinary skill in the art would have recognized that text messaging does not require a user to actively receive/accept the communication in real-time as with a phone call or other real-time two-way

communication, thereby increasing the convenience and effectiveness of communicating data, alerts, etc. *Id.*

Petitioner has shown persuasively that a person of ordinary skill in the art would have combined Vaios and Jae, optionally with Menard and Saylor, with a reasonable expectation of success in arriving at the features of claim 14.

3. *Claim 14*

As noted, claim 14 depends from claim 1 and recites “wherein the wireless device and at least one of the peripheral devices are configured for communications via text messaging.” Ex. 1001, 20:53–56. Petitioner contends that this limitation is taught by Jae, and provides reasons to combine Jae with Vaios, and optionally Menard and/or Saylor. Pet. 39–48. The limitations of claim 1 incorporated into claim 14 have already been addressed above in the discussion of the obviousness of claim 15 over Vaios, optionally with Menard and/or Saylor, in ground 1. *See* § II.E.5.

Petitioner contends that Jae teaches a monitoring device (e.g., outdoor terminal 100) and a peripheral device (e.g., mobile phone) configured for communications via text messaging. Pet. 40 (citing Ex. 1034 ¶¶ 214–225; Ex. 1011, code (57), 4:8–32, Fig. 2).

Petitioner contends that Jae discloses a “remote access security system, composed of an outdoor terminal for visitors, installed at the entrance door..., equipped with a camera, a liquid crystal display screen, a speaker, a microphone, and various operation buttons to enable the visitor to call and make audio and video calls.” *Id.* (citing Ex. 1011, code (57)). Petitioner contends that Jae’s outdoor terminal 100 includes a liquid crystal display unit 120 for displaying a pre-stored image or text message. *Id.*

(citing Ex. 1011, 4:13–14, Fig. 2). Petitioner asserts that Jae states that its liquid crystal display unit 120 is configured to display a text or video image sent out by the user. *Id.* at 41 (citing Ex. 1011, 4:31–32). Petitioner contends that because the user operates a mobile phone to communicate with outdoor terminal 100, a person of ordinary skill in the art would understand that the text sent by the user is communicated from the mobile phone to outdoor terminal 100, which constitutes communications via text messaging, as claimed. *Id.* (citing Ex. 1034 ¶ 216). Regarding input of the text message via the phone, Petitioner notes that Jae states the following:

The outdoor terminal 100 according to the present invention is able to display a message left by the user. The message input can be input by the user through the mobile phone or the indoor terminal 200; in the case of using the indoor terminal 200, a text message can be input in the same way as a text message input method in a mobile phone using a function key and a number input key.

Pet. 42 (citing Ex. 1011, 5:30–33). Petitioner contends that a person of ordinary skill in the art would have recognized Jae as describing a system in which the user can input a text message via the mobile phone (or alternatively the indoor terminal 200) for display on LCD unit 120 of outdoor terminal 100. *Id.* (citing Ex. 1034 ¶ 216).

Petitioner further notes that Jae teaches that text messages may be sent from outdoor terminal 100 to the mobile phone. Pet. 42–43 (citing Ex. 1034 ¶ 217; Ex. 1011, 7:3–9). Petitioner contends that a person of ordinary skill in the art would have understood Jae to disclose communication of a text message (in the form of a text password that is input, for example, using number input key 151) from outdoor terminal 100 through indoor terminal 200 to the mobile phone. *Id.* at 43 (citing Ex. 1034 ¶ 217). Petitioner

further notes that Jae states that the indoor terminal 200 includes a liquid crystal display unit 220 for displaying images and text messages transmitted from the outdoor terminal 100. *Id.* at 44 (citing Ex. 1011, 4:21–23).

Petitioner thus contends that Jae discloses claim 14. *Id.* at 45–46 (citing Ex. 1034 ¶ 218).

Other than the arguments discussed in §§ II.E.4 and II.E.5.b, Patent Owner does not dispute Petitioner’s contentions. PO Resp. 35.

Petitioner has shown by a preponderance of the evidence that Jae’s outdoor terminal 100 and mobile phone are configured for text messaging, and that this teaching may be applied to Vaios’s exterior module 200D and peripheral devices (including a mobile phone), optionally further combined with Menard and/or Saylor.

4. *Conclusion for Ground 3*

Petitioner has shown persuasively that a person of ordinary skill in the art would have been motivated to combine Vaios and Jae, optionally with Menard and/or Saylor, with a reasonable expectation of success in arriving at claim 14. Petitioner has further shown persuasively that each limitation of claim 14 is taught or suggested by the combination of Vaios and Jae, optionally with Menard and/or Saylor. Accordingly, Petitioner has shown by a preponderance of the evidence that claim 14 is obvious over the combination of Vaios and Jae, optionally with Menard and/or Saylor.

H. *Ground 4: Alleged Obviousness of Claim 15 over Vaios, Menard, Saylor, and Schnell*

Petitioner contends that claim 15 would have been obvious over the combination of Vaios and Schnell, optionally with Menard and/or Saylor. Pet. 48–57 (citing Ex. 1034 ¶¶ 226–243). Claim 15 depends from claim 1.

Ex. 1001, 20:57–61. Petitioner contends that Vaios anticipates, or alternatively with Menard and/or Saylor, renders claim 1 obvious for the reasons stated in ground 1 (*see* § II.E.5). Pet. 48.

1. Overview of Schnell (Ex. 1031)

Schnell is titled “Motion Detector Camera” and includes a camera 100, 400, 700, as shown below in Figure 1.

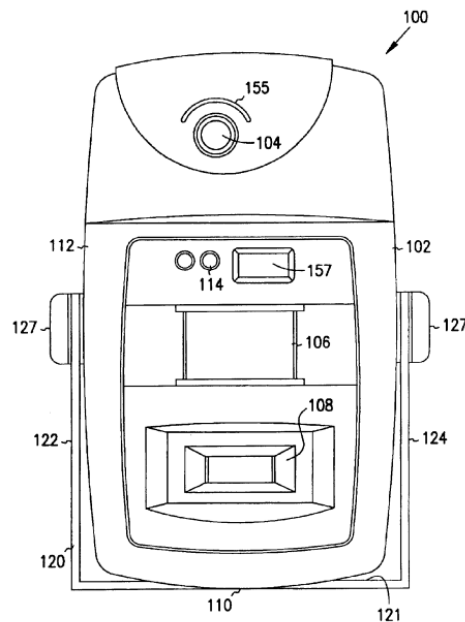


FIG. 1

The camera 100 in Figure 1 includes an LCD display 157. Ex. 1031, code (57), 2:33–37, 3:64–67, Figs. 1–3. LCD display 157 displays the number of exposures taken by the camera, and other information, such as power level and so forth. *Id.* at 3:64–67. The camera 100, 400, 700 is portable and includes one or more mounting members 142, 144, stand 120, housing 102, flexible band 150, mounting holes 126, 128, and bolt 127. *Id.* at 1:28–30, 1:62–63, 2:33–3:23, 5:34–47, 5:61–64, 6:3–28, Figs. 1–3, 7. In addition, the camera includes a DC jack 464 and electrical connections for batteries 468. *Id.* at 5:10–13, Fig. 5B.

2. *Motivation to Combine*

Petitioner contends that it would have been obvious to a person of ordinary skill in the art at the time of the alleged invention to combine the portability, locking mechanism, electrical receptacle, and portable battery power supply features taught in Schnell with the cameras of Vaios (either alone or as combined with the teachings of Menard and/or Saylor) to enable a portable monitoring device that can be easily and securely affixed in a desired location. Pet. 56 (citing Ex. 1034 ¶¶ 239–242). Petitioner contends that such a modification would have simply involved the combination of known elements (e.g., Schnell’s camera mounting configurations, battery power supply, and resulting portability with Vaios’s camera and monitoring system, as optionally modified in view of Menard and/or Saylor) according to known methods to yield predictable results. *Id.* According to Petitioner, the combination would have yielded predictable results and had a reasonable expectation of success given the simplicity of the mechanical design for such mounting mechanisms as detailed in Schnell. *Id.* Given the drawings and description of such configurations in Schnell, Petitioner contends that a person of ordinary skill in the art could have predictably and successfully included a similar mounting configuration on other cameras, particularly given the ubiquity of hardware camera (and other device) mounts at the time. *Id.* Petitioner further asserts that the widespread use of batteries and DC power supplies as taught in Schnell would have made the incorporation of such portable power supplies (and their associated electrical receptacle) in Vaios’s cameras a simple, predictable task. *Id.* at 56–57. Petitioner argues that incorporation of both of these features would have been easily and

predictably achieved and would have enabled the portability of Vaios's camera. *Id.* at 57 (citing Ex. 1034 ¶ 241).

Petitioner further contends that a person of ordinary skill in the art would have been motivated to make the combination of Vaios and Schnell by the desirability of creating portable cameras/monitoring devices as expressly noted by Schnell. *Id.* (citing Ex. 1034 ¶ 242; Ex. 1031, 1:28–30, 1:62–63, 3:2–24). Petitioner contends that a person of ordinary skill in the art would have recognized the benefits associated with being able to quickly and easily relocate a portable monitoring device that may be securely mounted and connected to power in a simple, convenient manner (e.g., using hand-turnable knobs and/or straps and portable battery power supplies), and just as easily unsecured and disconnected to facilitate desired movement to a different location. *Id.*

3. *Claim 15*

As noted, claim 15 depends from claim 1 and recites “wherein the wireless device is portable, has a locking mechanism, and an electrical receptacle for quickly attaching to a source of electricity, and wherein the wireless device further includes a portable energy source.” Ex. 1001, 20:57–61. Petitioner contends that Vaios in view of Schnell, optionally with Menard and/or Saylor, renders claim 15 obvious. Pet. 48–57 (citing Ex. 1034 ¶¶ 226–243). Petitioner notes that claim 15 depends from claim 1. As explained in ground 1 (§ II.E.5), Petitioner persuasively shows that Vaios renders claim 1 obvious with Menard and/or Saylor.

Petitioner contends that Schnell discloses a wireless device (e.g., camera 100, 400, 700) that is portable and includes a locking mechanism (e.g., one or more of mounting members 142, 144, stand 120, housing 102,

flexible band 150, mounting holes 126, 138, and bolt 127) and an electrical receptacle (e.g., DC jack 464 and/or electrical connections for batteries 468) for quickly attaching to a source of electricity. Pet. 49 (citing Ex. 1034 ¶¶ 228–243; Ex. 1031, 1:28–30, 1:62–63, 2:33–3:23, 5:34–47, 5:61–64, 6:3–28, Figs. 1–3, 5B, 7).

Petitioner contends that Schnell’s camera is portable as claimed. *Id.* For example, Petitioner contends that Schnell describes its camera as a “portable, full-featured motion detector camera.” *Id.* (citing Ex. 1031, 1:63 (emphasis original)). Petitioner further contends that Schnell describes various features of the camera that contribute to its portability, such as mounting methods that “allows the camera to be portable while still allowing a user to know it is secure.” *Id.* (citing Ex. 1031, 3:20–23). Schnell also teaches that “the separate, yet all-in-one, structure of motion detector camera 100 allows flash 108 to be larger than in conventional 35 mm cameras while still providing the portable structure provided by including all the necessary picture taking components within a single housing 102.” *Id.* (citing Ex. 1031, 3:59–63). Petitioner contends that Schnell further states that the camera’s “compact size allows for easy portability and allows the camera to be easily hidden.” *Id.* at 49–50 (citing Ex. 1031, 5:61–64). Petitioner contends that a person of ordinary skill in the art would thus have recognized that Schnell’s camera is portable, thus satisfying this limitation. *Id.* at 50 (citing Ex. 1034 ¶ 229).

Petitioner contends that Schnell teaches multiple features for securing the camera in a desired location, each of which satisfies the “locking mechanism” limitation of claim 15. *Id.* (citing Ex. 1034 ¶¶ 230–235). For example, Petitioner contends that Schnell teaches a support or stand 120 to

which the camera is removably attached using a threaded bolt. *Id.* (citing Ex. 1031, 2:61–3:12). Stand 120 and mounting bolts 127 are used to securely attach the camera, as shown in Schnell’s Figure 2B. Petitioner contends that Schnell also teaches mounting the camera using mounting members 142, 144 and flexible band 150. *Id.* (citing Ex. 1031, 3:13–23). Petitioner asserts that both the configuration for securing the camera to stand 120 using threaded bolts as well as mounting the camera using mounting members and flexible band constitute “locking mechanisms” as claimed. *Id.* at 52–53 (citing Ex. 1034 ¶¶ 231, 233). Petitioner states that each of these configurations include specific components (e.g., bolts 127, holes, 126, 128, and stand 120 as well as mounting members 142, 144 and band 150) for locking the camera relative to a support structure. *Id.* at 53.

Petitioner further contends that Schnell’s camera includes an electrical receptacle for quickly attaching to a source of electricity. *Id.* at 53–54 (citing Ex. 1034 ¶ 236). For example, Petitioner asserts that Schnell’s cameras include a power supply 304. *Id.* at 54 (citing Ex. 1031, 4:1–12). Petitioner states that Schnell teaches several options for such a power supply. *Id.* For example, Petitioner alleges that Schnell states that camera 100 includes DC jack 464 for optionally providing external power to the camera. *Id.* (citing Ex. 1031, 5:12–13, Fig. 5B). Petitioner contends that Schnell further teaches the optional use of batteries 468 as a power supply. *Id.* (citing Ex. 1031, 5:13–14). Petitioner contends that Patent Owner has asserted such a battery configuration satisfies this “electrical receptacle” limitation. *Id.* (citing Ex. 1033, 12).

Petitioner contends that both the DC jack 464 and the compartment that contains the batteries 468 and/or the contacts that electrically connect to

the terminals of batteries 468 constitute an “electrical receptacle for quickly attaching to a source of electricity,” as claimed. *Id.* (citing Ex. 1034 ¶ 236). Petitioner thus argues that Schnell’s DC jack 464 as well as the components of the camera for connecting to batteries 468 each satisfy this limitation. *Id.*

Also, Petitioner contends that Schnell discloses a wireless device (camera 100, 400, 700) having a portable energy source (e.g., batteries 468). Pet. 54 (citing Ex. 1034 ¶¶ 237–238; Ex. 1031, 5:13–14, 6:3–28, Fig. 5C). Petitioner further contends, for example, that Schnell states that “batteries 468 can also be used as a power supply.” *Id.* at 55 (citing Ex. 1031, 5:13–14, Fig. 5C). Schnell’s Figure 5C depicts batteries 468 and the associated compartment for holding such batteries. *Id.* Petitioner contends such batteries are a “portable energy source,” thereby satisfying this limitation. *Id.* (citing Ex. 1034 ¶¶ 237–238). Petitioner further notes that the ’614 patent states “DVMS module 10 optionally includes a small portable energy source, such as a battery.” *Id.* (citing Ex. 1001, 8:1–2).

Other than the arguments presented in §§ II.E.4 and II.E.5.b, Patent Owner does not dispute Petitioner’s contentions for this ground.

4. *Conclusion for Ground 4*

Petitioner has shown persuasively that each limitation of claim 15 is at least suggested by the combination of Vaios and Schnell, optionally with Menard and/or Saylor, and that a person of ordinary skill in the art would have had reason to combine the prior art references, with a reasonable expectation of success in arriving at the claims. Accordingly, Petitioner has shown by a preponderance of the evidence that claim 15 is obvious over the combination of Vaios and Schnell, optionally with Menard and/or Saylor.

I. Ground 5: Alleged Obviousness of Claim 14 over Naidoo-068, Vaios, Saylor, and Sabie

As noted, claim 14 of the '614 patent depends from claim 1 and recites “wherein the wireless device and at least one of the peripheral devices are configured for communications via text messaging.” Ex. 1001, 20:53–56. Petitioner contends that claim 1 is anticipated by Naidoo-068 or alternatively obvious over Naidoo-068 in combination with Vaios and/or Saylor. Pet. 58. Petitioner contends that claim 14 of the '614 patent is obvious over Naidoo-068 with Sabie, and optionally with Vaios and/or Saylor. *Id.* at 57 (citing Ex. 1034 ¶¶ 244–314).

1. Overview of Naidoo-068 (Ex. 1007)

Naidoo-068 relates to a “video security system for the remote verification and monitoring of conditions surrounding an alarm signal.” Ex. 1007, code (57). “[T]he security gateway is operable to detect an alarm condition and to record video of at least a portion of the premises relating to the alarm condition.” *Id.* at 2:51–53.

Naidoo-068’s Figure 1 is shown below:

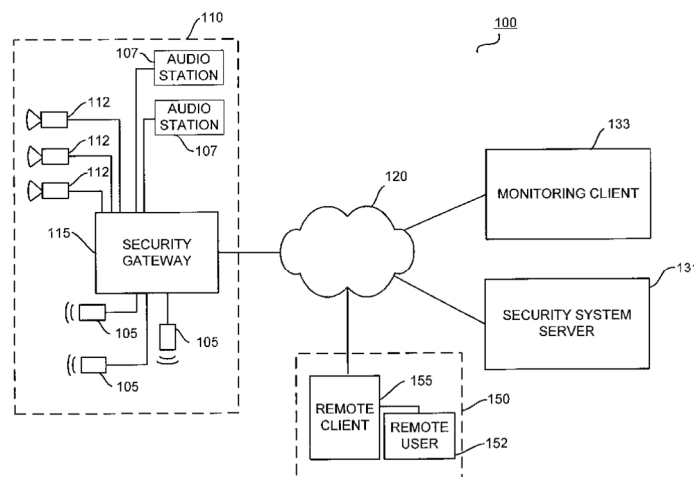


FIG. 1

Figure 1 above depicts a block diagram of security system 100, that comprises security gateway 115, and video cameras 112 and alarm sensor 105 coupled thereto and located at premises 110. Ex. 1007, 6:39–50.

Monitoring client 133 and security system server 131 also couple to security gateway 115 through network 120. *Id.* As background, Naidoo-068 states that “[c]onventional security systems typically protect a building” with “[s]ensors . . . installed on doors and/or windows,” and “[w]hen the system is on and a sensor is tripped, a signal is sent . . . using radio frequencies (on wireless systems) . . . whenever an alarm occurs.” *Id.* at 1:25–36.

In Naidoo-068’s system, alarm sensors 105 coupled to security gateway 115 detect alarm conditions. Ex. 1007, 7:38–39. “Upon detection of an alarm condition, security gateway 115 captures video (usually through an attached video camera 112) of the target site, and sends the video to security system server 131 in real time.” *Id.* at 6:51–54. “Whether separate alarm sensors 105 are present or not, security gateway 115 may use video from video camera 112 to assist in the determination of whether an alarm condition exists and thereby whether to generate and send an alarm signal to the security system server 131.” *Id.* at 7:60–64.

“Alarm sensors 105 may be wired directly into an alarm control panel built into security gateway 115 or they may be wirelessly connected.” Ex. 1007, 7:45–47. “It is understood that ‘coupled’ and ‘operatively coupled’ do not require a direct connection, a wired connection, or even a permanent connection.” *Id.* at 6:60–63. “[S]ecurity gateway 115 may be located remotely, but remain operatively coupled to security sensors 105 and video cameras 112 which are at the premises.” *Id.* at 6:48–50.

2. *Motivation to Combine*

Petitioner contends that it would have been obvious to use the text messaging communications of Sabie for communications between the wireless device and peripheral devices of Naidoo-068 (as alternatively modified in view of Vaios and/or Saylor) for the same reasons discussed above for similarly combining Sabie and Vaios (and Menard/Saylor). Pet. 71 (Ex. 1034 ¶¶ 312–314); *see also Id.* at 65–66 (explaining motivations for combining the functionalities of Naidoo-068’s gateway 115 and server 131); *Id.* at 67–68 (explaining that associating Naidoo-068’s remote clients with respective individuals is obvious for same reasons for similarly combining Saylor with Vaios in § II.E.4).

For similar reasons as previously stated, Petitioner has shown persuasively that a person of ordinary skill in the art would have combined Naidoo-068 and Sabie, optionally with Vaios and/or Saylor. *See* §§ II.E.4 and II.F.2.

3. *Claim 1’s Recitations*

Petitioner notes that claim 1 is directed to a “communication and monitoring system.” Pet. 58. Naidoo-068 discloses such a system (a “video security system for the remote verification and monitoring of conditions surrounding an alarm signal”). *Id.* (citing Ex. 1034 ¶¶ 245–246; Ex. 1007, code (57), Fig. 1). Petitioner contends that Naidoo-068’s system “detects alarm conditions and transmits information and video relating to the alarm condition” and provides “remote clients 155 with the ability to . . . view live and recorded media from their home.” *Id.* at 59 (citing Ex. 1007, code (57), 20:14–17).

Patent Owner does not dispute that Naidoo-068 discloses the preamble of claim 1 so it is unnecessary to determine whether the preamble is limiting.

Petitioner has shown that Naidoo-068 discloses the preamble.

Claim 1 recites limitation (a) as “a wireless device associated with a door and configured to communicate audio and video data.” Ex. 1001, 19:45–46. Petitioner notes that Naidoo-068 discloses “wireless devices” (“video camera 112”), which are “operable to capture video of monitored premises 110.” Pet. 59 (citing Ex. 1007, 7:54–64; 6:51–54, 16:53–17:3, Fig. 1; Ex. 1034 ¶ 248).

Video cameras 112 are “wireless devices” that “communicate video data” to “security gateway 115,” which is further coupled to other components including “security system server 131.” *Id.* (citing Ex. 1007, 6:51–54, 8:2–3, 8:19–22, 13:17–39; Ex. 1034 ¶¶ 249–251). Video cameras 112 include “smart cameras” that “perform video capture, compression and storage and . . . communicate with the security gateway using a home area network, e.g., wireless.” *Id.* (citing Ex. 1007, 16:33–17:3) (emphasis in Petition).

Petitioner contends that Naidoo-068 refers to at least some of the video data communicated from cameras 112 as “alarm video.” Pet. 59 (citing Ex. 1034 ¶ 252). Petitioner asserts that, for example, Naidoo-068 teaches that alarm information sent from security gateway 115 to the security system server 131 may include alarm video. *Id.* (citing Ex. 1007, 13:32–36). The alarm video may include audio. *Id.* at 59–60 (citing Ex. 1007, 13:36–39). Further, Naidoo-068’s smart cameras have functionalities of video module 620, including the ability to stream audio

and video. *Id.* (citing Ex. 1007, 16:53–58, 16:25–29). Thus, Naidoo-068’s cameras are configured to communicate audio and video data. *Id.* at 60 (citing Ex. 1034 ¶¶ 252–253).

Alternatively, Petitioner contends that it was obvious to incorporate such functionality into Naidoo-068’s smart cameras given Naidoo-068’s disclosure, the predictability and likelihood of success of such a combination, and its motivating advantages. *Id.* (citing Ex. 1034 ¶¶ 254–255). Petitioner contends that Naidoo-068’s video cameras 112 are “associated with a door” as demonstrated by Naidoo-068’s teaching that they are “positioned at the front door of a residence.” *Id.* (citing Ex. 1007, 14:22–23; Ex. 1034 ¶ 249). Petitioner contends that Naidoo-068’s cameras 112 satisfy this limitation. *Id.* (citing Ex. 1034 ¶¶ 247–257).

Patent Owner argues that Naidoo-068 alone or in any combination does not disclose a wireless device associated with a door. PO Resp. 35–37. Specifically, Patent Owner contends that Naidoo-068 discloses two exclusive embodiments, one in which a camera monitors alarm conditions and another involving non-alarm conditions. *Id.* at 36–37. Patent Owner argues that Petitioner is attempting to combine distinct embodiments to show anticipation. *Id.* at 37.

Petitioner replies that Naidoo-068 performs both of these functionalities, i.e., monitors both during alarm conditions and non-alarm conditions. Pet. Reply 10–11 (citing Pet. 59–60). Petitioner contends that Naidoo-068 states that “operators can . . . access audio and video associated with the current alarm condition” and that “***In addition***, . . . video from non-alarm conditions may ***also*** be viewed.” *Id.* at 10–11 (citing Ex. 1007, 14:15–43; Pet. 59–60) (emphasis Petitioner’s).

As Petitioner notes, Naidoo-068 discloses “an exterior camera 112, positioned at the front door of a residence.” *Id.* at 11 (citing Ex. 1007, 14:20–23). Petitioner asserts that Naidoo-068 discloses that this camera monitors during both alarm and non-alarm conditions, which are not mutually exclusive embodiments. *Id.*; Pet. 59–60; Ex. 1007, 14:15–43. Even assuming Patent Owner’s argument is correct, this ground is based on obviousness, and combining different embodiments of a single reference is not precluded under obviousness. *See, e.g., Boston Scientific Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009).

Petitioner has shown that Naidoo-068 and Vaios disclose the “graphical user interface” limitation (a) of claim 1.

Claim 1 recites limitation (b) as “a plurality of peripheral devices, each peripheral device associated with a respective user.” Ex. 1001, 19:47–48. Petitioner contends that Naidoo-068 discloses peripheral devices (remote clients/stations/terminals 155) each associated with a respective user (remote user). Pet. 60 (citing Ex. 1034 ¶ 259; Ex. 1007, 8:60–9:25, 21:50). Petitioner contends that Naidoo-068’s system allows access to security gateway 115 and security system server 131 using a remote station 155. Pet. 60–61. Petitioner states that the remote user 155 must be authenticated first by security system server 131. *Id.* at 61 (citing Ex. 1007, 8:60–65). Petitioner further alleges that Naidoo-068 teaches a two-way audio stream may be initiated between a remote user (such as a remote client or monitoring station personnel) and the premises. *Id.* (citing Ex. 1007, 17:18–20).

Petitioner further contends that Naidoo-068 discloses that multiple remote clients 155 and associated users are included in the system as

demonstrated by the reference's repeated use of "remote clients" and "remote users" as well as "General Administrator," guest users, and multiple associated accounts. *Id.* (citing Ex. 1007, 20:14–16, 20:35–37, 20:49–21:6, 21:19–20, 21:44–45, 22:15–25; Ex. 1034 ¶ 260).

Petitioner contends that Naidoo-068 teaches that remotes users may view and edit account information and view live and record media at an associated website through a messaging interface. Petitioner asserts that Naidoo-068 discloses that remote users use associated remote clients 155. *Id.* (citing Ex. 1007, 20:14–18, 21:43–48; Ex. 1034 ¶ 261).

Alternatively, Petitioner contends that it was obvious for Naidoo-068's remote clients to each be associated with a respective user in view of Saylor for the same reasons discussed for combining Vaios and Saylor. Pet. 62 (citing Ex. 1034 ¶¶ 262–267); *see* § II.E.4.

Petitioner thus contends that Naidoo-068, alone or with Saylor, teaches this limitation. *Id.* (citing Ex. 1034 ¶¶ 258–268).

Patent Owner does not dispute Petitioner's assertion that Naidoo-068 alone or with Saylor discloses this limitation.

We determine that Petitioner has shown that Naidoo-068 alone or with Saylor teaches the "peripheral devices" limitation (b) of claim 1.

Claim 1 of the '614 patent further recites limitation (c) as "a computer configured for communication with the wireless device and configured for communication with each of the peripheral devices," and limitation (d) "wherein the computer executes software, in accordance with which . . ." certain operations enumerated in the claim are performed. Ex. 1001, 19:49–51. Petitioner contends that Naidoo-068 discloses a computer (e.g., security system server 131) configured for communication with the wireless

device (video camera 112) and each peripheral device (remote clients 155).
Pet. 62 (citing Ex. 1007, 6:48–54, 7:22–27, 8:60–65, Fig. 1; Ex. 1034 ¶ 270).

Petitioner contends that Naidoo-068’s security system server 131 is a “computer” that “executes software.” *Id.* at 63 (citing Ex. 1034 ¶ 271). According to Petitioner, components of security system server 131 includes software programs executable on processor-based devices, or implemented as software running on one or more computing devices, or devices operating under the Microsoft® Windows NT™ operating system. *Id.* (citing Ex. 1007, 18:15–26).

Petitioner contends that security system server 131 communicates with cameras 112 and remote clients 155 through network 120 and/or security gateway 114. Pet. 62 (citing Ex. 1034 ¶ 272). Security gateway 115 captures video through video camera 112, and sends the video to security system server 131. *Id.* (citing Ex. 1007, 6:51–54). Application server 724 of security system server 131 provides video from cameras 112 to remote client 155 as well as two-way streaming of audio between remote client 155 and speakers/microphones. *Id.* at 64 (citing Ex. 1007, 21:14–27). Petitioner contends that security system server 131 communicates with cameras 112 and remote clients 155 given that it receives video from cameras 112 and facilitates two-way transmission of audio between remote clients 144 and devices (e.g., microphone/speakers) associated with cameras 112. *Id.* (citing Ex. 1034 ¶ 272).

Petitioner contends that the presence of security gateway 115 does not refute that the security system server 131 is in communication with the video cameras because the security gateway 115 is effectively a conduit through

which data is communicated between security system server 131 and cameras 112. *Id.* (citing Ex. 1034 ¶¶ 273–275).

Alternatively, Petitioner contends that it was obvious to combine the functionalities of security gateway 115 and security system server 131 into a single “computer” to satisfy this limitation. *Id.* (citing Ex. 1034 ¶¶ 276–285). Petitioner asserts that Vaios demonstrates that a single computer (local computer system 12) configured for communication with wireless devices (“video cameras 10”) and with peripheral devices (at end user locations 8) and that executes software was a known option for coordinating control of such monitoring systems. *Id.* According to Petitioner, local computer system 12 is a “server” like Naidoo-068’s security system server 131 and similarly coordinates data capture and transmission between cameras and peripheral devices. Pet. 64–65 (citing Ex. 1003, 3:24–46; Ex. 1034 ¶ 372). Petitioner additionally contends that local computer system 12 interfaces directly with cameras 10, thereby acting as a gateway to these cameras by facilitating communication between cameras 10 and other system components. *Id.* (citing Ex. 1003, 3:24–26; Ex. 1034 ¶ 280).

Petitioner thus contends that Naidoo-068, alone or with Vaios, teaches limitations (c) and (d) of claim 1. *Id.* (citing Ex. 1034 ¶¶ 269–286).

Patent Owner does not dispute that Naidoo-068, alone or with Vaios, discloses limitations (c) and (d) of claim 1.

We determine that Petitioner has shown that Naidoo-068, alone or with Vaios, discloses limitations (c) and (d) of claim 1.

Claim 1 recites limitation 1(d)(i) as “the association of each of the peripheral devices with a respective user is maintained.” Ex. 1001, 19:54–55. Petitioner contends that Naidoo-068’s security system server 131

executes software to maintain the association of each peripheral device (remote client 155) with a respective user (remote user 152). Pet. 66 (citing Ex. 1034 ¶¶ 288–290).

According to Petitioner, Naidoo-068's system provides access to the security system server 131 using remote station 155. *Id.* at 67 (citing Ex. 1007, 8:60–65). Naidoo-068 establishes and maintains accounts for guest users which include access permission and authentication information (e.g., surname or username and password). *Id.* (citing Ex. 1007, 20:61–65, 21:55–60). When a remote client 155 connects with security system server 131, the security system server 131 authenticates the remote user, and if authenticated, provides the remote user with an access token that includes an identification of the user and associates access permissions. *Id.* (citing Ex. 1007, 20:14–22, 22:15–37). By maintaining user-specific accounts and providing user-specific access tokens to remote clients 155 associated with specific users, Petitioner contends that Naidoo-068 maintains the association of each peripheral device (remote client 155) with a respective user. *Id.* (citing Ex. 1034 ¶ 290).

Alternatively, Petitioner contends that it was obvious for Naidoo-068's remote clients 144 to each be associated with a respective user in view of Saylor. *Id.* (citing Ex. 1034 ¶¶ 291–296). Petitioner contends that Saylor discloses peripheral devices (phones, pagers, mobile devices) to which alarm notifications are sent and which are each associated with a respective individual via the address book in user database 140. *Id.*

Accordingly, Petitioner contends that Naidoo-068, alone or with Saylor, teaches this limitation. *Id.* at 68 (citing Ex. 1034 ¶¶ 287–297).

Patent Owner does not dispute Petitioner's contentions concerning this limitation.

We determine that Petitioner has shown that Naidoo-068, alone or with Saylor, teaches limitation 1(d)(i) of claim 1.

Claim 1 recites limitation 1(d)(ii) as "audio and video data from the wireless device is received by the computer." Ex. 1001, 19:56–57. Petitioner contends that Naidoo-068 discloses that audio and video data from the wireless device (cameras 112) is received by the computer (security system server 131/security gateway 115). Pet. 68 (citing Ex. 1034 ¶ 299).

Petitioner contends that Naidoo-068's system detects and alarm condition and records video relating to the alarm condition. *Id.* (citing Ex. 1007, 2:51–53, 6:51–54). According to Petitioner, the security gateway notifies the security system server of the alarm condition and transfers the alarm video to a security server system in real time. *Id.* (citing Ex. 1007, 2:56–59, 13:32–36). Petitioner asserts that this alarm video may include audio and video data from cameras 112. *Id.* (citing Ex. 1007, 13:36–39).

Furthermore, Petitioner contends that Naidoo-068's smart cameras have functionalities of the video module 620, which include the capability of streaming live audio and video. *Id.* (citing Ex. 1007, 16:53–58, 16:25–27; Ex. 1034 ¶ 300). Alternatively, Petitioner contends it was obvious to include the audio streaming capabilities of video module 620 in Naidoo-068's smart cameras given these disclosures by Naidoo-068, thus satisfying this limitation. Pet. 68–69 (Ex. 1034 ¶¶ 301–302). Petitioner contends this modification would have merely involved the simple incorporation of the audio streaming capabilities/components (e.g., microphone, audio streaming, etc.) of the video module into the smart cameras, which would have been

predictably and successfully accomplished. *Id.* at 69. Petitioner contends that a person of ordinary skill in the art would have been motivated to do so to enable communication of audio associated with the streamed video. *Id.*

Petitioner thus contends that security system server 131 receives audio and video data from video cameras 112, satisfying this limitation. *Id.* (citing Ex. 1034 ¶¶ 298–303).

Patent Owner does not dispute Petitioner’s contentions concerning this limitation.

We determine that Petitioner has shown that Naidoo-068 discloses limitation 1(d)(ii) of claim 1.

Claim 1 of the ’614 patent further recites limitation 1(d)(iii) as “a graphical user interface is provided through which audio and video data from the wireless device is accessible by each respective user using one of the peripheral devices.” Ex. 1001, 19:58–61. Petitioner contends that Naidoo-068’s security system server 131 includes a messaging interface 738 that provides remote clients 155 with the ability to view live and recorded media from their home. Pet. 69 (citing Ex. 1007, 18:30–33, 20:14–19). According to Petitioner, Naidoo-068’s messaging interface 738 is a network-based interface through which application server 734 of security system server 131 provides and/or facilitates the features available to remote client 155 including viewing and editing account information and viewing media. *Id.* at 69–70 (citing Ex. 1007, 20:18–22, 21:43–49). Petitioner asserts that server 131 thus provides a graphical user interface via messaging interface 738 which enables a user to view graphical data and provide inputs. *Id.* at 70 (citing Ex. 1034 ¶¶ 304–305). Petitioner contends that the media presented on the graphical user interface includes video and audio data, and

that remote client 155 includes a web-browser-based video client for accessing audio and video data. *Id.* (citing Ex. 1007, 19:4–8, 20:49–51; Ex. 1034 ¶ 306). According to Petitioner, audio and video from cameras 112 is accessible through this graphical user interface, satisfying these claim limitations. *Id.* (citing Ex. 1034 ¶ 307). Alternatively, Petitioner contends it would have been obvious to include audio with the video presented on the graphical user interface so that a remote individual could hear the sounds associated with the premises being monitored, particularly given that audio data is transmitted with video data. *Id.* (citing Ex. 1034 ¶¶ 308–310).

Petitioner similarly contends that Vaios teaches a graphical user interface for providing audio and video to the end user. Pet. 70. Petitioner asserts that it was obvious to use a similar graphical user interface in Naidoo-068 by incorporating Vaios’s graphical user interface software or by substituting Vaios’s graphical user interface for Naidoo-068’s. *Id.* (citing Ex. 1034 ¶ 309–310). Petitioner argues that such a graphical user interface presented motivating advantages including improved user experience, convenience, and control. *Id.* at 70–71 (citing Ex. 1034 ¶ 310).

Petitioner thus contends that Naidoo-068 discloses, or alternatively renders obvious alone or with Vaios and/or Saylor, all limitations of claim 1 of the ’614 patent.

Patent Owner asserts that Naidoo-068, alone or with Vaios and/or Saylor, does not disclose limitation 1(d)(iii). PO Resp. 35–39. Concerning the graphical user interface, Patent Owner argues that Naidoo-068’s “messaging interface 738” does not include graphics. *Id.* at 37–38.

Petitioner replies that Dr. Hochwald explained that “messaging interface 738” displays graphical data by presenting “live and recorded

media,” which is graphical as opposed to text. Pet. Reply 11–12 (citing Ex. 1034 ¶ 306; Ex. 1007, 18:30–33, 20:14–28, 21:43–49; Ex. 1052 ¶ 43).

Alternatively, Petitioner contends that it was obvious for Naidoo-068’s “messaging interface 738” to use a graphical user interface as taught by Vaios. *Id.* at 12 (citing Pet. 71; Ex. 1051 ¶ 44). Petitioner argues that incorporating Vaios’s graphical user interface into Naidoo-068’s interface would provide “improved user experience, convenience, and control.” *Id.* (citing Pet. 70–71; Ex. 1034 ¶¶ 308–310; Ex. 1051 ¶ 44).

We agree with Petitioner that the graphical user interface in Vaios’s Figure 3 and corresponding description would have led a POSITA to combine Vaios with Naidoo-068 for “improved user experience, convenience, and control.” Pet. 70–71 (citing Ex. 1034 ¶¶ 309–310). Thus, we do not agree with Patent Owner’s arguments.

We determine that Petitioner has shown that Naidoo-068 and Vaios, and optionally Saylor, discloses limitation 1(d)(iii) of claim 1.

4. *Claim 14*

Claim 14 of the ’614 patent depends from claim 1 and further recites “wherein the wireless device and at least one of the peripheral devices are configured for communications via text messaging.” Ex. 1001, 20:53–56. Petitioner contends that “Sabie teaches a wireless device (e.g., ‘sensors/measuring devices 2’ and/or ‘device for applying the method 3’) and a peripheral device (e.g., ‘mobile phone 5’) configured for communications via text messaging.” Pet. 71 (citing Ex. 1034 ¶¶ 312–314).

Petitioner contends that it would have been obvious to similarly use Sabie’s text messaging for communications between Naidoo-068’s wireless device and peripheral devices (alternatively as modified in view of Vaios

and/or Saylor) for the same reasons discussed above for similarly combining Sabie with Vaios (and Menard/Saylor). *Id.* (citing Ex. 1034 ¶ 313).

Petitioner contends that the combination of Naidoo-068, Vaios, Saylor, and Sabie renders claim 14 obvious. *Id.* (citing Ex. 1034 ¶¶ 312–314).

Patent Owner does not dispute Petitioner’s contentions regarding the limitations of claim 14 additional to those recited in claim 1.

We determine that Petitioner has shown that Naidoo-068 combined with Vaios discloses the limitations of claim 14 additional to those recited in claim 1.

5. *Conclusion for Ground 5*

Petitioner has shown persuasively that a POSITA would have been motivated to combine Naidoo-068, Vaios, Saylor, and Sabie with a reasonable expectation of success in arriving at claim 14. Petitioner has further shown that the combination teaches each limitation of claim 14 including those incorporated from claim 1. Accordingly, Petitioner has established by a preponderance of the evidence that claim 14 of the ’614 patent would have been obvious over the combination of Naidoo-068, Vaios, Saylor, and Sabie.

J. Ground 6: Alleged Obviousness of Claim 14 over Naidoo-068, Vaios, Saylor, and Jae

Petitioner contends that claim 14 is obvious over Naidoo-068 and Jae optionally with Vaios and/or Saylor. Pet. 72 (citing Ex. 1034 ¶¶ 315–317).

Claim 14 depends from claim 1. For reasons discussed, Petitioner contends that Naidoo-068 teaches or, alternatively, would have accounted for all elements of claim 1 in view of Vaios and/or Saylor. *Id.*

1. Motivation to Combine

Petitioner contends that it would have been obvious to similarly use the text messaging communications of Jae for communications between the wireless device and peripheral devices of Naidoo-068 (as alternatively modified by Vaios and/or Saylor) for the same reasons discussed above for combining Jae with Vaios (and Menard/Saylor). *Id.* (citing Ex. 1034 ¶ 316); *see* Sect. II.F.2. Petitioner contends that, accordingly, the combination of Naidoo-068, Vaios, Saylor, and Jae renders claim 14 obvious. *Id.* at 73.

2. Claim 14

Claim 14 depends from claim 1 and additionally recites “wherein the wireless device and at least one of the peripheral devices are configured for communications via text messaging.” Ex. 1001, 20:53–56. Petitioner contends that this limitation is taught by Jae, and provides reasons to combine Jae with Naidoo-068, and optionally Vaios and/or Saylor. Pet. 72–73. The limitations of claim 1 incorporated into claim 14 have already been addressed above in the discussion of the obviousness of claim 14 over Naidoo-068, optionally with Vaios and/or Saylor, in ground 5. *See* § II.I.3.

For the limitation of claim 14, Petitioner contends that Jae teaches a monitoring device (e.g., outdoor terminal 100) and a peripheral device (e.g., mobile phone) configured for communications via text messaging. Pet. 72 (citing Ex. 1034 ¶¶ 315–317).

For this ground, Patent Owner submits the same arguments discussed in ground 5, which we determine do not undermine Petitioner’s showing for the reasons explained in §§ II.I.2–3. PO Resp. 35–49.

3. *Conclusion for Ground 6*

Petitioner has shown that one of ordinary skill in the art would have had reason to combine Naidoo-068 and Jae, optionally with Vaios and/or Saylor, with a reasonable expectation of success in arriving at the claimed invention. Petitioner further shows that each limitation of claim 14 including those incorporated from claim 1, is taught by the combination of Naidoo-068 and Jae, optionally with Vaios and/or Saylor. Consequently, Petitioner has shown by a preponderance of the evidence that claim 14 is obvious over the combination of Naidoo-068 and Jae, optionally with Vaios and Saylor.

K. *Ground 7: Alleged Obviousness of Claim 15 over Naidoo-068, Vaios, Saylor, and Schnell*

Petitioner contends that claim 15 is obvious over Naidoo-068 and Schnell optionally with Vaios and/or Saylor. Pet. 73–74 (citing Ex. 1034 ¶¶ 318–322).

Claim 15 depends from claim 1. For reasons discussed, Petitioner contends that Naidoo-068 teaches or, alternatively, would have accounted for all elements of claim 1 in view of Vaios and/or Saylor. *Id.*

1. *Motivation to Combine*

Petitioner contends that it would have been obvious to include portability, locking mechanism, and electrical receptacle features of Schnell in the wireless device of Naidoo-068 (as alternatively modified in view of Vaios and/or Saylor) for the same reasons that Petitioner previously mentioned for combining Schnell with Vaios (and Menard/Saylor). *Id.* at 74 (citing Ex. 1034 ¶ 321); *see* § II.H.2.

2. *Claim 15*

Claim 15 depends from claim 1 and additionally recites “wherein the wireless device is portable, has a locking mechanism, and an electrical receptacle for quickly attaching to a source of electricity, and wherein the wireless device further includes a portable energy source.” Ex. 1001, 20:53–56. Petitioner contends that claim 15 is taught by Schnell, and provides reasons to combine Schnell with Naidoo-068, and optionally Vaio and/or Saylor. Pet. 73–74. The limitations of claim 1 incorporated into claim 15 have already been addressed above in the discussion of the obviousness of claim 14 over Naidoo-068, optionally with Vaio and/or Saylor, in ground 5. *See* § II.I.3.

For the limitation additionally recited in claim 15, Petitioner contends that Schnell discloses a wireless device (e.g., camera 100, 400, 700) that is portable and includes a locking mechanism (e.g., one or more of mounting members 142, 144, stand 120, housing 102, flexible band 150, mounting holes 126, 128, and bolt 127) and an electrical receptacle (e.g., DC jack 464 and/or electrical connections for batteries 468) for quickly attaching to a source of electricity. Pet. 73–74 (citing Ex. 1034 ¶¶ 319–322).

Patent Owner’s arguments against the combination have already been considered and we determine they do not undermine Petitioner’s contentions. PO Resp. 35–49.

3. *Conclusion for Ground 7*

Petitioner has shown that one of ordinary skill in the art would have had reason to combine Naidoo-068, Schnell, Vaio and Saylor with a reasonable expectation of success in arriving at the claimed invention. Petitioner further has shown that each limitation of claim 15 including those

incorporated from claim 1, is taught or suggested by the combination. Consequently, Petitioner has shown by a preponderance of the evidence that claim 15 is obvious over the combination of Naidoo-068 and Schnell, optionally with Vaios and/or Saylor.

III. CONCLUSION

We determine that Petitioner has demonstrated by a preponderance of the evidence that claims 14 and 15 of the '614 patent are unpatentable notwithstanding Patent Owner's arguments.

IV. ORDER

For the foregoing reasons, it is

ORDERED that Petitioner establishes by a preponderance of the evidence that challenged claims 14 and 15 of the '614 patent are unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.¹⁵

¹⁵ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding. *See* 84 Fed. Reg. 16654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. §§ 42.8(a)(3), (b)(2).

In summary:

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not shown Unpatentable
15	103(a)	Vaios, Menard, Saylor	15	
14	103(a)	Vaios, Menard, Saylor, Sabie	14	
14	103(a)	Vaios, Menard, Saylor, Jae	14	
15	103(a)	Vaios, Menard, Saylor, Schnell	15	
14	103(a)	Naidoo-068, Vaios, Saylor, Sabie	14	
14	103(a)	Naidoo-068, Vaios, Saylor, Jae	14	
15	103(a)	Naidoo-068, Vaios, Saylor, Schnell	15	
Overall Outcome			14, 15	

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